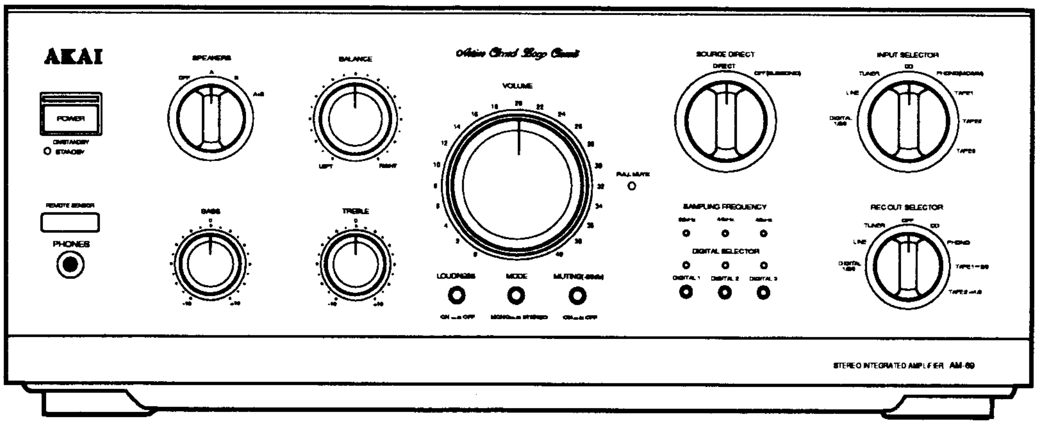
AKAI SERVICE MANUAL


AKAI
POWER
STANDBY
REMOTE SENSOR
PHONES
SPEAKERS
OFF
A
B
A+B
BALANCE
LEFT
RIGHT
BASS
TREBLE
VOLUME
FULL MUTE
LOUDNESS
MODE
MUTING
ON OFF
MONO STEREO
SOURCE DIRECT
DIRECT
INPUT SELECTOR
TUNER
CD
LINE
TAPE1
TAPE2
SAMPLING FREQUENCY
DIGITAL SELECTOR
DIGITAL 1
DIGITAL 2
DIGITAL 3
REC OUT SELECTOR
PHONO
STEREO INTEGRATED AMPLIFIER AM-69

MODEL AM-69

DIGITAL INTEGRATED AMPLIFIER

MODEL AM-59, 69

SPECIFICATIONS

Power output	
AM-69	220 W+220 W (DIN, 4 ohms at 1 kHz, 1%) 110 W + 110 W (FTC, 8 ohms at 20 Hz to 20 kHz, 0.05 %)
AM-59	200W + 200 W (DIN, 4 ohms at 1 kHz, 1%) 100 W+100 W (FTC, 8 ohms at 20 Hz to 20 kHz, 0.05 %)
Power band width	5 Hz to 60 kHz (0.1 %)
Total harmonic distortion	0.005 % (1 kHz, 8 ohms)
Frequency response	5 Hz to 100 kHz (+0 dB, -3 dB)
Tone control	
Bass	± 10 dB (100 Hz)
Treble	± 10 dB (10 kHz)
Input level / Impedance	
Phono (MM)	2.0 mV / 47 kohms
Phono (MC)	200 µV / 100 ohms
Tuner, CD, Tape	150 mV / 47 kohms
Maximum input level	
Phono (MM)	170 mV
Tuner, CD, Tape	9 V (at tone control flat)
Damping factor	120 (1 kHz, 8 ohms)
Residual noise	0.1 mV (IEC-A)
S/N ratio	
Phono (MM)	86 dB (IEC-A)
Phono (MC)	71 dB (IEC-A)
Tuner, CD, Tape	102 dB (IEC-A)
Audio mute	- 20dB
Full mute	- 70 dB
Channel separation	65 dB (1 kHz) / 55 dB (10 kHz)

Cross talk	
CD to Phono	90 dB (1 kHz, 500mV input level)
CD to Tuner/Tape	90 dB (1 kHz, 500mV input level)
Required speaker impedance	
A or B	4 to 16 ohms
A and B	8 to 16 ohms
Power requirements	220-230 V, 50 Hz for Europe except U.K.
Power consumption	
AM-69	400 W
AM-59	300 W
Dimensions	425 (W) X 177 (H) X 401 (D) mm
Weight	
AM-69	14.7 kg
AM-59	13.8 kg

[DIGITAL section (AM-69 only)]

D/A converter	Interpolative one bit dual type
Digital filter	18 bit, 8 times over sampling
Sampling frequency	32 kHz / 44.1 kHz / 48 kHz
Digital input level	
Coaxial	0.5 Vp-p / 75 ohms
Optical	- 14 dBm to - 23dBm
Frequency response	5 Hz to 20 kHz (± 0.3 dB)
Dynamic range	96 dB
Total harmonic distortion	0.002 %

Standard accessory

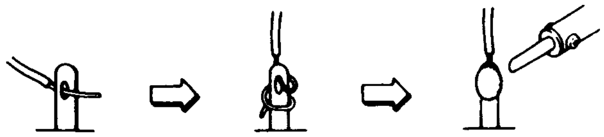
Remote control unit	x 1
Batteries for remote control	x 2
Operator's manual	x 1

* For improvement purposes, specifications and design are subject to change without notice.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.

The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphonejacks, signal-input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.

The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.

Please leave them at an appropriate depot.

★INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

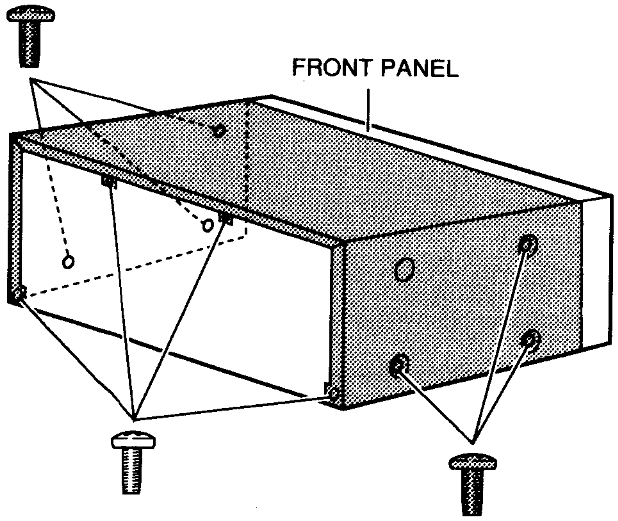
Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
A	U.S.A
B	U.K.
C	Canada
E	Europe (except UK)
J	Japan
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

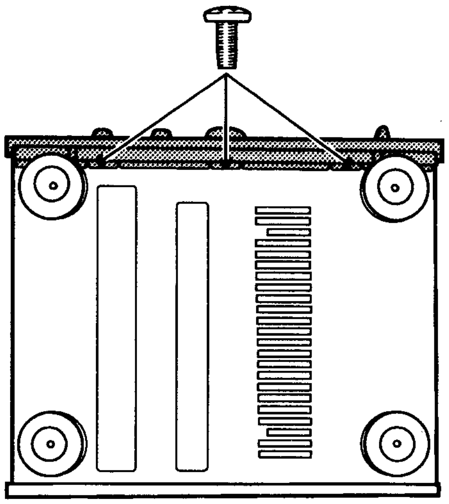
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

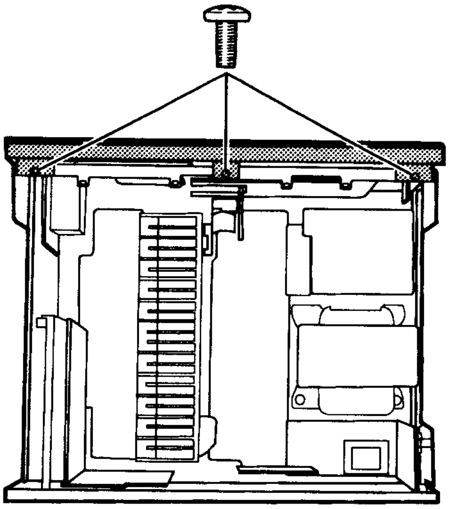
1. Removal of the UPPER COVER



2. Removal of the FRONT PANEL



Remove the eight knobs by pulling them out.



II. PRINCIPAL PARTS LOCATION

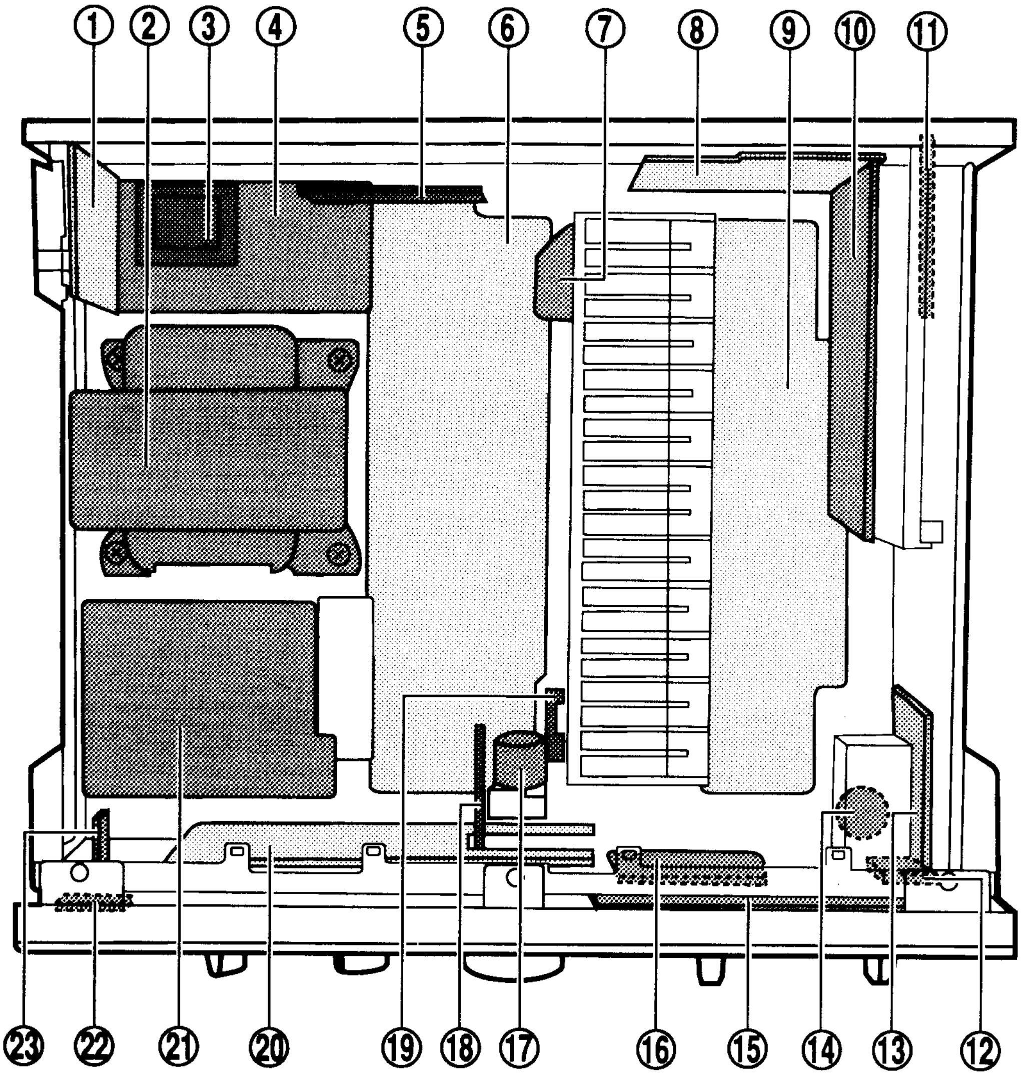


Fig.2-1

1. PRIMARY PCB
2. POWER TRANSFORMER
3. SUB TRANSFORMER
4. SUB TRANS PCB
5. SP TERMINAL PCB
6. I - AMP PCB
7. THERMO (L) PCB
8. INPUT PCB
9. V - AMP PCB
10. REC SELECTOR PCB
11. DAC PCB (AM-69 only)
12. REC OUT SW PCB
13. INPUT SW PCB
14. INPUT SW MOTOR
15. SYSCON PCB
16. SOURCE DIRECT SW PCB
17. VOLUME MOTOR
18. VOLUME PCB
19. THERMO (R) PCB
20. TONE PCB
21. POWER SUPPLY PCB
22. POWER SW PCB
23. PHONES JACK PCB

III. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A) [S] :SAA (Australia)
[B] :BEAB (England) [U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe) [V] :VDE (Germany)
[J] :JPN (Japan) [Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AX-415115M	REMOCON RC-S59
2	AX-415116M	REMOCON RC-S69
3	*BT-415037M	TRANS POW A1030S-EV
4	*BT-415117M1	TRANS POW A2077 EV [AM-59][T1]
5	*BT-415118M1	TRANS POW A2078 EV [AM-69][T1]
6	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC
7	EC-381263J	C EC V SNP 103M 63.0DC
8	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
9	ED-415085J	D LED SLR-33VC3F RED
10	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
11	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
12	ED-348990	D SILICON H DS446
13	ED-301911	D SILICON H DS448
14	ED-344280	D SILICON H GMA-01-FY2 F05
15	ED-307572	D SILICON H 1SS131
16	ED-624903	D SILICON H 1S2473
17	*ED-384278J	D SILICON RBV602 200/6.0A
18	*ED-511907	D SILICON 1N4002 100/1.0A
19	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
20	*ED-370990	D SILICON 1SR35-100A HS F10
21	*ED-346557	D ZENER H HZ12A3L
22	*ED-330218	D ZENER H HZ15-2L
23	*ED-346567	D ZENER H HZ16-1L
24	ED-346570	D ZENER H HZ18-3L
25	*ED-330219	D ZENER H HZ20-2L
26	*ED-377933	D ZENER H HZ27-3LFA F10
27	*ED-343854	D ZENER H HZ30-2L
28	*ED-343410	D ZENER H HZ6A1L [AM-69]
29	*ED-346525	D ZENER H HZ6A3L
30	ED-346530	D ZENER H HZ6C3L
31	*EF-415131J	FUSE S504 T 250V 315MA
32	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
33	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]
34	*EF-405403J	FUSE S506 T 250V 5.00A
35	EI-330352	IC BA6109
36	EI-416800J	IC LC66404A-4B67 A2075-1
37	EI-403530J	IC LC7822N
38	EI-393323J	IC M5218AL-771
39	EI-393326J	IC M5218AP-721
40	EI-348785	IC M5220L
41	EI-360043	IC M5220P
42	*EI-362587J1	IC M5238AL
43	EI-412415J	IC PCM69AP-J
44	EI-390063J	IC PD0037
45	EI-403437J	IC SM5840AP
46	EI-360040J1	IC TC74HCU04AP
47	EI-354080	IC UPC1237H
48	EI-382875J	OSC CE CST4.00MGW 4MHZ
49	EJ-394459J	SOCKET OPTICAL GP1F32R
50	EJ-394490J	SOCKET OPTICAL GP1F32T
51	EJ-415134J	SW SLIDE SSSU04 2-04-02S
52	*EQ-415055J	RELAY POW VS-6MB 1NO 6V
53	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
54	EQ-400957J	RELAY SIG RY12W-OH-K 2TR 12V
55	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
56	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
57	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
58	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
59	ES-415120J	SW PUSH SPEC31 3THROW *
60	ES-415100J	SW ROTARY SRBV14 01-04N
61	ES-415126J	SW ROTARY SRBV17 01-07N [AM-59]
62	ES-415138J	SW ROTARY SRBV18 01-08N [AM-69]
63	ES-415099J	SW ROTARY SRBV22 02-02N
64	ES-415137J	SW SPE.ROTARY SRBAA48 02-08N [AM-69]
65	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
66	ET-403432J	DETECTOR SPS-420-1
67	ET-356336	TR DTA114ES
68	ET-369248	TR DTA114YS
69	ET-415140J	TR DTA115TS T05 [AM-69]
70	ET-354415	TR DTA144ES [AM-69]
71	ET-353897	TR DTC114ES
72	ET-354365	TR DTC114YS
73	ET-354414	TR DTC144ES [AM-69]
74	ET-322353	TR FET 2SK117 Y
75	ET-360749	TR FET 2SK170 BL
76	ET-337759	TR FET 2SK246 GR [AM-69]
77	*ET-415051J	TR 2SA1186 P,Y LF118
78	ET-338244	TR 2SA1207 R,S
79	ET-368048	TR 2SA1208 S
80	*ET-345626	TR 2SA1248 S,T [AM-69]
81	ET-353899	TR 2SA1317 S,T,U
82	*ET-352726	TR 2SA1392 T,U [AM-69]
83	*ET-403527J	TR 2SA1507 S,T [AM-69]
84	*ET-415158J	TR 2SA1837
85	*ET-349705	TR 2SC2320 E,F,G
86	*ET-415053J	TR 2SC2837 P,Y LF118
87	*ET-348830	TR 2SC2909 S,T
88	ET-368047	TR 2SC2910 S
89	*ET-345625	TR 2SC3116 S,T [AM-69]
90	ET-397160J	TR 2SC3330 R,S,T,U,V
91	ET-378524J	TR 2SC3383 S,T,U
92	ET-394735J	TR 2SC3792 T05
93	*ET-403526J	TR 2SC3902 S,T
94	*ET-415156J	TR 2SC4793
95	*ET-376880	TR 2SD1266 P
96	EV-415136J	SW.SPE.ROTARY SRBAA47 02-07N [AM-59]
97	EV-401270J	VR ROTARY RK16312 B103X2
98	EV-416950J	VR ROTARY RK1631220 SPL W104 UP
99	EV-415032M	VR SPL EUWM HD003 B15 B104X2 [AM-59]
100	EV-415139J	VR SPL RK18112MC B104X2 [AM-69]

2. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1-A	BA-A2077T020A	ML PC (#) MAIN AMP BLK AM-59/ML
1-B	BA-A2077T020B	ML PC (#) MAIN AMP BLK AM-69/ML
2-A	BA-A2077T030A	ML PC (#) PREAMP BLK AM-59/ML
2-B	BA-A2077T030B	ML PC (#) PREAMP BLK AM-69/ML
3-A	BA-A2077T040A	ML PC (#) SYSCON BLK AM-59/ML
3-B	BA-A2077T040B	ML PC (#) SYSCON BLK AM-69/ML
4	BA-A2078T050A	ML PC DAC BLK AM-69/ML [AM-69]

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARDS.
- V-AMP P.C BOARD
- I-AMP P.C BOARD
- POWER SUPPLY P.C BOARD
- SP TERMINAL P.C BOARD
- PHONES JACK P.C BOARD
- THERMO (L) P.C BOARD
- THERMO (R) P.C BOARD

PC (#) PRE AMP BLK CONSISTS OF FOLLOWING P.C BOARDS.
- INPUT P.C BOARD
- REC SELECTOR P.C BOARD
- INPUT SW P.C BOARD
- SOURCE DIRECT SW P.C BOARD
- TONE P.C BOARD
- REC OUT SW P.C BOARD
- VOLUME P.C BOARD
- PRIMARY P.C BOARD
- SUB TRANS P.C BOARD

PC (#) SYSCON BLK CONSISTS OF FOLLOWING P.C BOARDS.
- SYSCON P.C BOARD
- POWER SW P.C BOARD

3. V-AMP P.C BOARD

Ref. No.	Part No.	Description
D1	ED-301911	D SILICON H DS448
D2	ED-301911	D SILICON H DS448
D3	*ED-346567	D ZENER H HZ16-1L
D4	*ED-346567	D ZENER H HZ16-1L
D7	*ED-343854	D ZENER H HZ30-2L
D8	*ED-343854	D ZENER H HZ30-2L
D9	*ED-343854	D ZENER H HZ30-2L
D10	*ED-343854	D ZENER H HZ30-2L
D51	ED-301911	D SILICON H DS448
D52	ED-301911	D SILICON H DS448
D53	*ED-346567	D ZENER H HZ16-1L
D54	*ED-346567	D ZENER H HZ16-1L
IC1	EI-393326J	IC M5218AP-721
R10	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R13	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R16	*ER-378517J	R OMF H S15 FS 2W 681J
R21	*ER-378517J	R OMF H S15 FS 2W 681J
R60	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R63	*ER-375108	R CB H S10FLR RDS 1/4W 272J
R66	*ER-378517J	R OMF H S15 FS 2W 681J
R71	*ER-378517J	R OMF H S15 FS 2W 681J
TR1	ET-322353	TR FET 2SK117 Y
TR2	ET-368047	TR 2SC2910 S
TR3	ET-368048	TR 2SA1208 S
TR4	*ET-368048	TR 2SA1208 S
TR5	*ET-368048	TR 2SA1208 S
TR6	*ET-368047	TR 2SC2910 S
TR7	*ET-368047	TR 2SC2910 S
TR8	*ET-368047	TR 2SC2910 S
TR10	*ET-368048	TR 2SA1208 S
TR51	ET-322353	TR FET 2SK117 Y
TR52	ET-368047	TR 2SC2910 S
TR53	ET-368048	TR 2SA1208 S
TR54	*ET-368048	TR 2SA1208 S
TR55	*ET-368048	TR 2SA1208 S
TR56	*ET-368047	TR 2SC2910 S
TR57	*ET-368047	TR 2SC2910 S
TR58	*ET-368047	TR 2SC2910 S
TR60	*ET-368048	TR 2SA1208 S

4. I-AMP P.C BOARD

Ref. No.	Part No.	Description
C101	EC-381263J	C EC V SNP 103M 63.0DC
C102	EC-381263J	C EC V SNP 103M 63.0DC
D101	*ED-384278J	D SILICON RBV602 200/6.0A
D102	*ED-384278J	D SILICON RBV602 200/6.0A [AM-69]
D105	ED-348990	D SILICON H DS446
D106	ED-348990	D SILICON H DS446
D107	ED-348990	D SILICON H DS446
D108	ED-348990	D SILICON H DS446
D109	ED-348990	D SILICON H DS446
D110	ED-346570	D ZENER H HZ18-3L
D111	ED-346570	D ZENER H HZ18-3L
D112	ED-346570	D ZENER H HZ18-3L
D114	ED-346567	D ZENER H HZ16-1L
D120	ED-307572	D SILICON H 1SS131
D121	ED-307572	D SILICON H 1SS131
D122	ED-307572	D SILICON H 1SS131
D155	ED-348990	D SILICON H DS446
D156	ED-348990	D SILICON H DS446
D181	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
D182	*ED-392651J	D SILICON 1N5401 F15 100/3.0A
FR101	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR102	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR107	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR108	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR151	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR152	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
FR157	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
FR158	*ER-341493	R FUSE H S10 ERD2FC 1/4W 1001G
IC101	EI-354080	IC UPC1237H
L101	EO-332116	COIL FIX 2 103AK-006A 2R2K
L151	EO-332116	COIL FIX 2 103AK-006A 2R2K
R103	*ER-324186	R CB H S10 FS RDS 1/4W 681J
R105	*ER-355214	R OMF H S15 FS 2W 151J
R109	ER-381265J	R OMF H S20 FS 3W 561J
R110	ER-383007J	R OMF H S12 FS 1W 1R0J
R111	ER-383007J	R OMF H S12 FS 1W 1R0J
R112	ER-383007J	R OMF H S12 FS 1W 1R0J
R113	ER-383007J	R OMF H S12 FS 1W 1R0J
R114	*ER-368226	R CT P R33+R33 5W
R115	*ER-368226	R CT P R33+R33 5W
R116	ER-400150J	R OMF H S20 FS 3W 4R7J
R117	ER-381266J	R OMF H S20 FS 3W 100J
R153	*ER-324186	R CB H S10 FS RDS 1/4W 681J
R155	*ER-355214	R OMF H S15 FS 2W 151J
R159	ER-381265J	R OMF H S20 FS 3W 561J
R160	ER-383007J	R OMF H S12 FS 1W 1R0J
R161	ER-383007J	R OMF H S12 FS 1W 1R0J
R162	ER-383007J	R OMF H S12 FS 1W 1R0J
R163	ER-383007J	R OMF H S12 FS 1W 1R0J
R164	*ER-368226	R CT P R33+R33 5W
R165	*ER-368226	R CT P R33+R33 5W
R166	ER-400150J	R OMF H S20 FS 3W 4R7J
R167	ER-381266J	R OMF H S20 FS 3W 100J
R181	*ER-418459J	R MF H T73 MK4 1W 220J
RL101	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
RL102	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
RL103	EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
TR101	ET-368047	TR 2SC2910 S
TR102	*ET-368047	TR 2SC2910 S
TR103	*ET-368048	TR 2SA1208 S
TR108	*ET-415053J	TR 2SC2837 P,Y LF118
TR109	*ET-415053J	TR 2SC2837 P,Y LF118
TR110	*ET-415051J	TR 2SA1186 P,Y LF118
TR111	*ET-415051J	TR 2SA1186 P,Y LF118
TR112	ET-378524J	TR 2SC3383 S,T,U
TR113	ET-368048	TR 2SA1208 S
TR116	ET-378524J	TR 2SC3383 S,T,U
TR117	ET-378524J	TR 2SC3383 S,T,U
TR118	ET-378524J	TR 2SC3383 S,T,U
TR119	ET-378524J	TR 2SC3383 S,T,U
TR151	ET-368047	TR 2SC2910 S
TR152	*ET-368047	TR 2SC2910 S
TR153	*ET-368048	TR 2SA1208 S
TR158	*ET-415053J	TR 2SC2837 P,Y LF118
TR159	*ET-415053J	TR 2SC2837 P,Y LF118
TR160	*ET-415051J	TR 2SA1186 P,Y LF118
TR161	*ET-415051J	TR 2SA1186 P,Y LF118
TR162	ET-378524J	TR 2SC3383 S,T,U

5. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
D201	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D202	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D203	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D204	*ED-379981J	D SILICON EG01LF-F4 F10 400/0.7A
D205	*ED-377933	D ZENER H HZ27-3LFA F10
D206	*ED-377933	D ZENER H HZ27-3LFA F10
D207	*ED-377933	D ZENER H HZ27-3LFA F10
D208	*ED-377933	D ZENER H HZ27-3LFA F10
D209	*ED-370990	D SILICON 1SR35-100A HS F10
D210	*ED-370990	D SILICON 1SR35-100A HS F10
D211	*ED-346557	D ZENER H HZ12A3L
D213	*ED-343410	D ZENER H HZ6A1L [AM-69]
D214	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D215	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D216	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D217	*ED-370990	D SILICON 1SR35-100A HS F10 [AM-69]
D218	*ED-346567	D ZENER H HZ16-1L [AM-69]
D219	*ED-346567	D ZENER H HZ16-1L [AM-69]
FR221	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
FR222	*ER-320528	R FUSE H ERD2FC 1/4W 22R0G [AM-69]
R201	*ER-415149J	R CB V T05 FLR 25FVJ 1/4W 151J
R202	*ER-415149J	R CB V T05 FLR 25FVJ 1/4W 151J
R208	*ER-415143J	R CB V T05 FLR 25FVJ 1/4W 2R2J
R212	*ER-415150J	R CB V T05 FLR 25FVJ 1/4W 4R7J [AM-69]
R223	*ER-704153	R OMF 1W 390J [AM-69]
TR201	*ET-368048	TR 2SA1208 S
TR202	*ET-368048	TR 2SA1208 S
TR203	*ET-368047	TR 2SC2910 S
TR204	*ET-368047	TR 2SC2910 S
TR205	*ET-415156J	TR 2SC4793
TR206	*ET-415158J	TR 2SA1837
TR207	*ET-376880	TR 2SD1266 P
TR211	*ET-352726	TR 2SA1392 T,U [AM-69]
TR212	*ET-403527J	TR 2SA1507 S,T [AM-69]
TR213	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR214	ET-352726	TR 2SA1392 T,U [AM-69]
TR215	*ET-352726	TR 2SA1392 T,U [AM-69]
TR216	ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR217	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
TR218	*ET-345625	TR 2SC3116 S,T [AM-69]
TR219	*ET-345626	TR 2SA1248 S,T [AM-69]
TR220	*ET-378524J	TR 2SC3383 S,T,U [AM-69]
F2	*EF-415131J	FUSE S504 T 250V 315MA
F3	*EF-415131J	FUSE S504 T 250V 315MA
F4-A	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
F4-B	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]
F5-A	*EF-405396J	FUSE S506 T 250V 1.00A [AM-59]
F5-B	*EF-405397J	FUSE S506 T 250V 1.25A [AM-69]

6. SP TERMINAL P.C BOARD

Ref. No.	Part No.	Description
TM301	EJ-342935	TERMINAL W/SCREW YKD31-0132P8P

7. PHONES JACK P.C BOARD

Ref. No.	Part No.	Description
J601	EJ-391132J	PHONE J 3P YKB24-5162 GP 6.3

8. THERMO (L) P.C BOARD

Ref. No.	Part No.	Description
TR104	*ET-378524J	TR 2SC3383 S,T,U
TR105	*ET-352726	TR 2SA1392 T,U
TR106	*ET-403526J	TR 2SC3902 S,T
TR107	*ET-403527J	TR 2SA1507 S,T

9. THERMO (R) P.C BOARD

Ref. No.	Part No.	Description
TR154	*ET-378524J	TR 2SC3383 S,T,U
TR155	*ET-352726	TR 2SA1392 T,U
TR156	*ET-403526J	TR 2SC3902 S,T
TR157	*ET-403527J	TR 2SA1507 S,T

10. INPUT P.C BOARD

Ref. No.	Part No.	Description
IC1	EI-360043	IC M5220P
J1	EJ-364546	PIN J YKC21-0070A P 2P
J2	EJ-390102J	PIN J YKC21-0045A 6P
J3	EJ-415133J	PIN J YKC21-0071A 4P
J5	EJ-415133J	PIN J YKC21-0071A 4P
J6	EJ-415133J	PIN J YKC21-0071A 4P
L1	EO-418469J	COIL FIX 3 ZJY51R5-2PB
L51	EO-418469J	COIL FIX 3 ZJY51R5-2PB
SW1	EJ-415134J	SW SLIDE SSSU04 2-04-02S
TR1	ET-360749	TR FET 2SK170 BL
TR2	ET-360749	TR FET 2SK170 BL
TR51	ET-360749	TR FET 2SK170 BL
TR52	ET-360749	TR FET 2SK170 BL

11. REC SELECTOR P.C BOARD

Ref. No.	Part No.	Description
D101	ED-301911	D SILICON H DS448 [AM-69]
D151	ED-301911	D SILICON H DS448 [AM-69]
D181	*ED-330219	D ZENER H HZ20-2L
D182	*ED-330219	D ZENER H HZ20-2L
D183	*ED-346567	D ZENER H HZ16-1L
D184	*ED-346567	D ZENER H HZ16-1L
D185	ED-301911	D SILICON H DS448
D186	ED-301911	D SILICON H DS448
D187	*ED-330219	D ZENER H HZ20-2L [AM-69]
D188	*ED-330219	D ZENER H HZ20-2L [AM-69]
IC101	EI-403530J	IC LC7822N
TR101	ET-394735J	TR 2SC3792 T05
TR102	ET-394735J	TR 2SC3792 T05
TR103	ET-394735J	TR 2SC3792 T05
TR104	ET-394735J	TR 2SC3792 T05
TR105	ET-394735J	TR 2SC3792 T05
TR106	ET-337759	TR FET 2SK246 GR [AM-69]
TR107	ET-337759	TR FET 2SK246 GR [AM-69]
TR108	ET-394735J	TR 2SC3792 T05 [AM-69]
TR151	ET-394735J	TR 2SC3792 T05
TR152	ET-394735J	TR 2SC3792 T05
TR153	ET-394735J	TR 2SC3792 T05
TR154	ET-394735J	TR 2SC3792 T05
TR155	ET-394735J	TR 2SC3792 T05
TR156	ET-337759	TR FET 2SK246 GR [AM-69]
TR157	ET-337759	TR FET 2SK246 GR [AM-69]
TR158	ET-394735J	TR 2SC3792 T05 [AM-69]
TR181	ET-354414	TR DTC144ES [AM-69]
TR182	ET-354415	TR DTA144ES [AM-69]
TR183	ET-415140J	TR DTA115TS T05 [AM-69]
TR184	ET-354414	TR DTC144ES [AM-69]

12. INPUT SW P.C BOARD

Ref. No.	Part No.	Description
D201	ED-346530	D ZENER H HZ6C3L
FR201	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
IC201	EI-330352	IC BA6109
SW201-A	EV-415136J	SW.SPE.ROTARY SRBAA47 02-07N [AM-59]
SW201-B	ES-415137J	SW SPE.ROTARY SRBAA48 02-08N [AM-69]

13. SOURCE DIRECT SW P.C BOARD

Ref. No.	Part No.	Description
SW250	ES-415099J	SW ROTARY SRBV22 02-02N

14. TONE P.C BOARD

Ref. No.	Part No.	Description
D301	*ED-330218	D ZENER H HZ15-2L
D302	*ED-330219	D ZENER H HZ20-2L
D303	*ED-330219	D ZENER H HZ20-2L
D304	ED-330218	D ZENER H HZ15-2L
D305	*ED-330219	D ZENER H HZ20-2L
D306	*ED-330219	D ZENER H HZ20-2L
D307	ED-624903	D SILICON H 1S2473
D308	ED-624903	D SILICON H 1S2473
D309	ED-624903	D SILICON H 1S2473
IC301	EI-393323J	IC M5218AL-771
IC302	EI-348785	IC M5220L
RL301	EQ-400957J	RELAY SIG RY12W-OH-K 2TR 12V
SW301	ES-415120J	SW PUSH SPEC31 3THROW *
SW302	ES-415100J	SW ROTARY SRBV14 01-04N
TR301	ET-338244	TR 2SA1207 R,S
TR302	*ET-338244	TR 2SA1207 R,S
TR303	*ET-348830	TR 2SC2909 S,T
TR304	*ET-348830	TR 2SC2909 S,T
TR305	ET-348830	TR 2SC2909 S,T
TR306	*ET-348830	TR 2SC2909 S,T
TR307	*ET-338244	TR 2SA1207 R,S
TR308	*ET-338244	TR 2SA1207 R,S
TR309	ET-397160J	TR 2SC3330 R,S,T,U,V
TR310	ET-397160J	TR 2SC3330 R,S,T,U,V
VR301	EV-401270J	VR ROTARY RK16312 B103X2
VR302	EV-401270J	VR ROTARY RK16312 B103X2
VR303	EV-416950J	VR ROTARY RK1631220 SPL W104 UP

15. REC OUT SW P.C BOARD

Ref. No.	Part No.	Description
SW401-A	ES-415126J	SW ROTARY SRBV17 01-07N [AM-59]
SW401-B	ES-415138J	SW ROTARY SRBV18 01-08N [AM-69]

16. VOLUME P.C BOARD

Ref. No.	Part No.	Description
D501	ED-301911	D SILICON H DS448
TR501	ET-353899	TR 2SA1317 S,T,U
TR502	ET-397160J	TR 2SC3330 R,S,T,U,V
TR503	ET-353899	TR 2SA1317 S,T,U
TR504	ET-397160J	TR 2SC3330 R,S,T,U,V
VR501-A	EV-415032M	VR SPL EUWM HD003 B15 B104X2 [AM-59]
VR501-B	EV-415139J	VR SPL RK18112MC B104X2 [AM-69]

17. PRIMARY P.C BOARD

Ref. No.	Part No.	Description
J601	EJ-415050J	SOCKET OUT M1882 3P
L601	*EO-332116	COIL FIX 2 103AK-006A 2R2K
L602	*EO-332116	COIL FIX 2 103AK-006A 2R2K
F1	*EF-405403J	FUSE S506 T 250V 5.00A

18. SUB TRANS P.C BOARD

Ref. No.	Part No.	Description
C701	*EC-389414J	C CE V DE7090 B102K 400AC
D701	*ED-511907	D SILICON 1N4002 100/1.0A
D702	*ED-511907	D SILICON 1N4002 100/1.0A
D703	*ED-511907	D SILICON 1N4002 100/1.0A
D704	*ED-511907	D SILICON 1N4002 100/1.0A
D705	ED-301911	D SILICON H DS448
D706	ED-301911	D SILICON H DS448
D707	ED-624903	D SILICON H 1S2473
D709	*ED-346530	D ZENER H HZ6C3L
RL701	*EQ-415055J	RELAY POW VS-6MB 1NO 6V
T701	*BT-415037M	TRANS POW A1030S-EV
TR701	*ET-376880	TR 2SD1266 P
TR702	ET-352726	TR 2SA1392 T,U
TR703	ET-378524J	TR 2SC3383 S,T,U
TR704	ET-378524J	TR 2SC3383 S,T,U

19. SYSCON P.C BOARD

Ref. No.	Part No.	Description
C802	EC-368118	C DBL LAYER EECS5R5H 224 5.5DC
D801	ED-301911	D SILICON H DS448
D802	ED-301911	D SILICON H DS448
D803	ED-307572	D SILICON H 1SS131
D804	ED-415085J	D LED SLR-33VC3F RED
D805	ED-624903	D SILICON H 1S2473 [AM-69]
D806	ED-624903	D SILICON H 1S2473 [AM-69]
D807	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D808	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D809	ED-403987J	D LED SLR33MC3F GREEN [AM-69]
D810	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
D811	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
D812	ED-405359J	D LED SEL2915A C,D ORANGE [AM-69]
IC801	EI-416800J	IC LC66404A-4B67 A2075-1
TR801	ET-353897	TR DTC114ES
TR802	ET-354365	TR DTC114YS
TR803	ET-369248	TR DTA114YS
TR804	ET-397160J	TR 2SC3330 R,S,T,U,V
TR805	ET-353899	TR 2SA1317 S,T,U [AM-69]
TR806	ET-354414	TR DTC144ES [AM-69]
TS801	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
TS802	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
TS803	ES-394427J	SW TACT SOR-133HS T05 [AM-69]
X801	EI-382875J	OSC CE CST4.00MGW 4MHZ

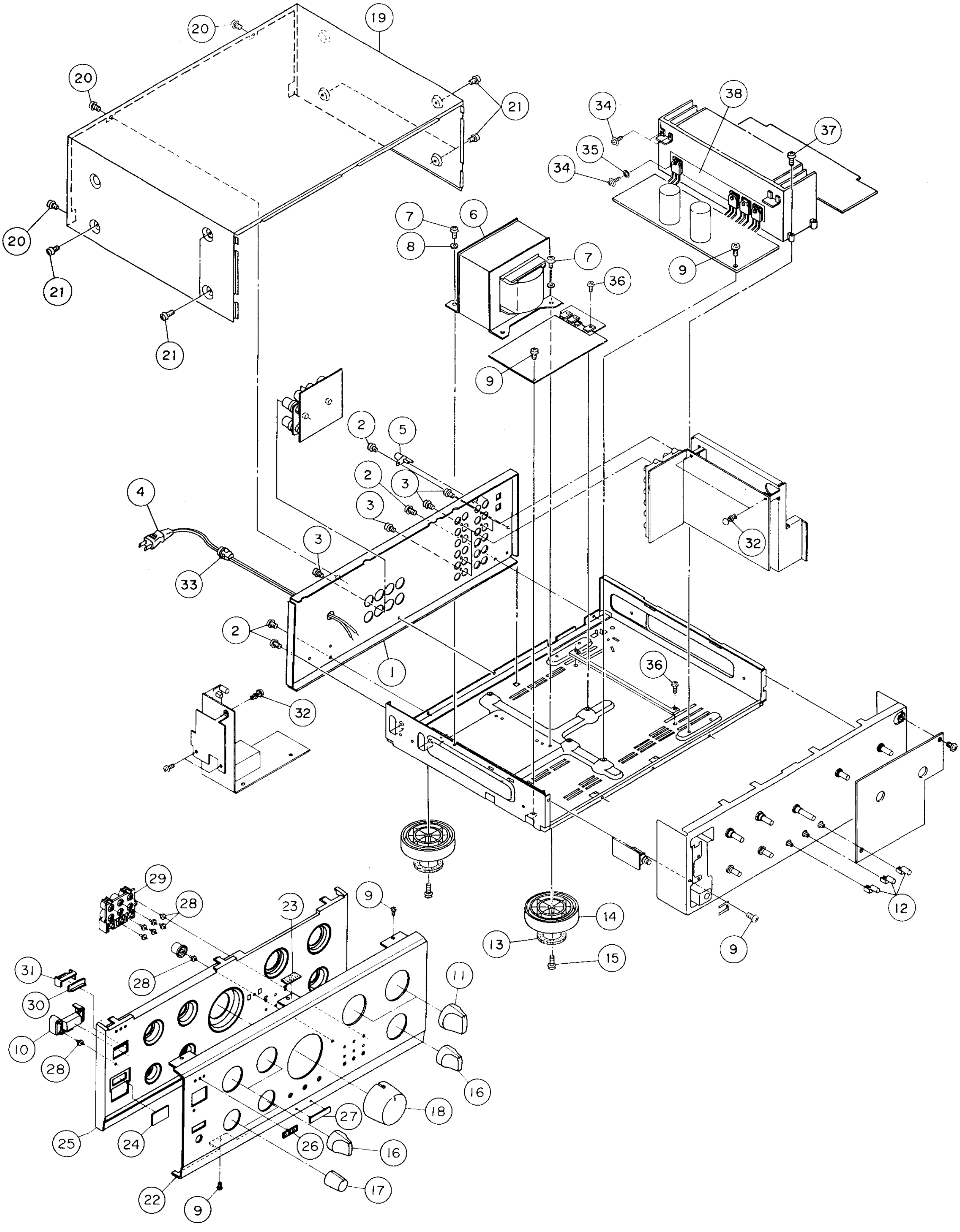
20. POWER SW P.C BOARD

Ref. No.	Part No.	Description
D851	ED-415085J	D LED SLR-33VC3F RED
D852	ED-403987J	D LED SLR33MC3F GREEN
D853	ED-403987J	D LED SLR33MC3F GREEN
PH851	ET-403432J	DETECTOR SPS-420-1
ST851	ES-394427J	SW TACT SOR-133HS T05

21. DAC P.C BOARD

Ref. No.	Part No.	Description
D1	ED-344280	D SILICON H GMA-01-FY2 F05
D2	ED-344280	D SILICON H GMA-01-FY2 F05
D3	ED-344280	D SILICON H GMA-01-FY2 F05
D4	*ED-346525	D ZENER H HZ6A3L
D5	*ED-346525	D ZENER H HZ6A3L
D6	*ED-343410	D ZENER H HZ6A1L
D7	ED-344280	D SILICON H GMA-01-FY2 F05
FL1	EH-385978J	FILTER EMI EXC-ELSR35T T05
FL2	EH-385788J	FILTER EMI EXC-ELSA35
IC1	EI-360040J1	IC TC74HCU04AP
IC2	EI-390063J	IC PD0037
IC3	EI-403437J	IC SM5840AP
IC4	EI-412415J	IC PCM69AP-J
IC5	*EI-362587J1	IC M5238AL
IC6	*EI-362587J1	IC M5238AL
J3	EJ-390086J	PIN J T6180-BAAA ORANGE 2P
J4	EJ-394490J	SOCKET OPTICAL GP1F32T
J5	EJ-394459J	SOCKET OPTICAL GP1F32R
L1	EO-403342J	COIL FIX 1 LAP02 F05 4R7K
TR1	ET-353897	TR DTC114ES
TR2	ET-354414	TR DTC144ES
TR3	ET-353897	TR DTC114ES
TR4	*ET-349705	TR 2SC2320 E,F,G
TR5	*ET-349705	TR 2SC2320 E,F,G
TR7	ET-354414	TR DTC144ES
TR8	ET-356336	TR DTA114ES

FINAL ASSEMBLY BLOCK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22. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1-A	SP-415341M1	PANEL REAR AM-59 (E) (SG)
1-B	SP-415365M1	PANEL REAR AM-69 (E) (SG)
2	ZS-385394J	ST BID30X06STL COP E.LOK C.PK4
3	ZS-394412J	BT BID30X08STL BZN PROJECTION
4	*EW-408724M	AC CORD200 SE1H03VVH2F VHR3N E
5	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
6-A	*BT-415117M1	TRANS POW A2077 EV [AM-59][T1]
6-B	*BT-415118M1	TRANS POW A2078 EV [AM-69][T1]
7	ZS-346742	ST BID40X08STL CMT CUP
8	ZW-410640J	SW40STL CMT
9	ZS-358936	ST BID30X06STL CMT
10	SB-415182M	BUTTON POWER (SG)
11	SK-415338M	KNOB SELECTOR (SG)
12	SK-402898J	BUTTON PUSH-B
13	SZ-407213J	FELT
14	SA-384105J	FOOT ROUND SHAPED (N)
15	ZS-304021	ST BID40X12STL CMT
16	SK-415178M	KNOB SELECTOR (SG)
17	SK-415180M	KNOB TONE (SG)
18	SK-415349J	KNOB VOLUME PART
19	SP-415469M1	COVER UPPER (1) (SG)
20	ZS-389964J	ST BID30X08STL COP E.LOK C.PK4
21	ZS-404225J	ST BID40X08STL BZN
22-A	SP-415336J	PANEL FRONT AM-59
22-B	SP-415356J	PANEL FRONT AM-69
23	ZW-381273J	SPACER
24	SE-415347M	FILTER REMOCON (SG)
25	SE-415340M	ESCUTCHEON FRONT (SG)
26	SM-365756C	NAME PLATE AKAI (2)
27	SM-368416B	NAME PLATE DIGITAL (1) B [AM-69]
28	SE-410963M	LENS LED (SG)
29	SB-415339J	BUTTON DIGITAL [AM-69]
30	SE-373237J1	LENS POW
31	SE-373256	CASE LED
32	ZW-698308	RV NYL30X055 BL
33	EZ-371605	BUSH CORD 2271
34	ZS-389961J	BT BID30X14STL COP CLEAR CUP
35	ZW-403334	SW30STL CMT
36	ZS-361450	ST BID30X10STL CMT
37	ZS-371016	ST BID30X14STL CMT
38	EZ-403425J	INSULATOR A *A2069

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

23. ACCESSARY

Ref. No.	Part No.	Description
1-A	AX-415115M	REMOCON RC-S59
1-B	AX-415116M	REMOCON RC-S69

INDEX

Part No.	Ref. No.
AX415115M	23-1-A
AX415116M	23-1-B
BAA2077T020A	2-1-A
BAA2077T020B	2-1-B
BAA2077T030A	2-2-A
BAA2077T030B	2-2-B
BAA2077T040A	2-3-A
BAA2077T040B	2-3-B
BAA2078T050A	2-4
BT415037M	18-T701
BT415117M1	22-6-A
BT415118M1	22-6-B
EC368118	19-C802
EC381263J	4-C101
EC381263J	4-C102
EC389414J	18-C701
ED301911	3-D1
ED301911	3-D2
ED301911	3-D51
ED301911	3-D52
ED301911	11-D101
ED301911	11-D151
ED301911	11-D185
ED301911	11-D186
ED301911	16-D501
ED301911	18-D705
ED301911	18-D706
ED301911	19-D801
ED301911	19-D802
ED307572	4-D120
ED307572	4-D121
ED307572	4-D122
ED307572	19-D803
ED330218	14-D301
ED330218	14-D304
ED330219	11-D181
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ED330219	11-D188
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ED346525	21-D5
ED346530	12-D201
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ED346557	5-D211
ED346567	3-D3
ED346567	3-D4
ED346567	3-D53
ED346567	3-D54
ED346567	4-D114
ED346567	5-D218
ED346567	5-D219
ED346567	11-D183
ED346567	11-D184
ED346570	4-D110
ED346570	4-D111
ED346570	4-D112
ED348990	4-D105
ED348990	4-D106
ED348990	4-D107
ED348990	4-D108
ED348990	4-D109
ED348990	4-D155
ED348990	4-D156
ED370990	5-D209
ED370990	5-D210
ED370990	5-D214
ED370990	5-D215
ED370990	5-D216
ED370990	5-D217
ED377933	5-D205
ED377933	5-D206
ED377933	5-D207
ED377933	5-D208
ED379981J	5-D201
ED379981J	5-D202
ED379981J	5-D203
ED379981J	5-D204
ED384278J	4-D101
ED384278J	4-D102
ED392651J	4-D181
ED392651J	4-D182
ED403987J	19-D807
ED403987J	19-D808
ED403987J	19-D809
ED403987J	20-D852
ED403987J	20-D853
ED405359J	19-D810
ED405359J	19-D811
ED405359J	19-D812
ED415085J	19-D804
ED415085J	20-D851
ED511907	18-D701
ED511907	18-D702
ED511907	18-D703
ED511907	18-D704
ED624903	14-D307
ED624903	14-D308
ED624903	14-D309
ED624903	18-D707
ED624903	19-D805
ED624903	19-D806
EF405396J	5-F4-A
EF405396J	5-F5-A
EF405397J	5-F4-B
EF405397J	5-F5-B
EF405403J	17-F1
EF415131J	5-F2
EF415131J	5-F3
EH385788J	21-FL2
EH385978J	21-FL1
EI330352	12-IC201
EI348785	14-IC302
EI354080	4-IC101
EI360040J1	21-IC1
EI360043	10-IC1
EI362587J1	21-IC5
EI362587J1	21-IC6
EI382875J	19-X801
EI390063J	21-IC2
EI393323J	14-IC301
EI393326J	3-IC1
EI403437J	21-IC3
EI403530J	11-IC101
EI412415J	21-IC4
EI416800J	19-IC801
EJ329610	22-5
EJ342935	6-TM301
EJ364546	10-J1
EJ390086J	21-J3
EJ390102J	10-J2
EJ391132J	7-J601
EJ394459J	21-J5
EJ394490J	21-J4
EJ415050J	17-J601
EJ415133J	10-J3
EJ415133J	10-J5
EJ415133J	10-J6
EJ415134J	10-SW1
EO332116	4-L101
EO332116	4-L151
EO332116	17-L601
EO332116	17-L602
EO403342J	21-L1
EO418469J	10-L1
EO418469J	10-L51
EQ400957J	14-RL301
EQ403529J1	4-RL101
EQ403529J1	4-RL102
EQ403529J1	4-RL103
EQ415055J	18-RL701
ER318248	4-FR101
ER318248	4-FR102
ER318248	4-FR151
ER318248	4-FR152
ER320528	5-FR221
ER320528	5-FR222
ER324186	4-R103
ER324186	4-R153
ER341493	4-FR107
ER341493	4-FR108
ER341493	4-FR157
ER341493	4-FR158
ER355214	4-R105
ER355214	4-R155
ER368226	4-R114
ER368226	4-R115
ER368226	4-R164
ER368226	4-R165
ER375108	3-R10
ER375108	3-R13
ER375108	3-R60
ER375108	3-R63
ER378517J	3-R16
ER378517J	3-R21
ER378517J	3-R66
ER378517J	3-R71
ER381265J	4-R109
ER381265J	4-R159
ER381266J	4-R117
ER381266J	4-R167
ER383007J	4-R110
ER383007J	4-R111
ER383007J	4-R112
ER383007J	4-R113
ER383007J	4-R160
ER383007J	4-R161
ER383007J	4-R162
ER383007J	4-R163
ER400150J	4-R116
ER400150J	4-R166
ER401039J	12-FR201
ER415143J	5-R208
ER415149J	5-R201
ER415149J	5-R202
ER415150J	5-R212
ER418459J	4-R181
ER704153	5-R223
ES394427J	19-TS801
ES394427J	19-TS802
ES394427J	19-TS803
ES394427J	20-ST851
ES415099J	13-SW250
ES415100J	14-SW302
ES415120J	14-SW301
ES415126J	15-SW401-A
ES415137J	12-SW201-B
ES415138J	15-SW401-B
ET322353	3-TR1
ET322353	3-TR51
ET337759	11-TR106
ET337759	11-TR107
ET337759	11-TR156
ET337759	11-TR157
ET338244	14-TR301
ET338244	14-TR302
ET338244	14-TR307
ET338244	14-TR308
ET345625	5-TR218
ET345626	5-TR219
ET348830	14-TR303
ET348830	14-TR304
ET348830	14-TR305
ET348830	14-TR306
ET349705	21-TR4
ET349705	21-TR5
ET352726	5-TR211
ET352726	5-TR214
ET352726	5-TR215
ET352726	8-TR105
ET352726	9-TR155
ET352726	18-TR702
ET353897	19-TR801
ET353897	21-TR1
ET353897	21-TR3
ET353899	16-TR501
ET353899	16-TR503
ET353899	19-TR805
ET354365	19-TR802
ET354414	11-TR181
ET354414	11-TR184
ET354414	19-TR806
ET354414	21-TR2
ET354414	21-TR7
ET354415	11-TR182
ET356336	21-TR8
ET360749	10-TR1
ET360749	10-TR2
ET360749	10-TR51
ET360749	10-TR52
ET368047	3-TR2
ET368047	3-TR6
ET368047	3-TR7
ET368047	3-TR8
ET368047	3-TR52
ET368047	3-TR56
ET368047	3-TR57
ET368047	3-TR58
ET368047	4-TR101
ET368047	4-TR102
ET368047	4-TR151
ET368047	4-TR152
ET368047	5-TR203
ET368047	5-TR204
ET368048	3-TR3
ET368048	3-TR4
ET368048	3-TR5

Part No.	Ref. No.
ET368048	3-TR10
ET368048	3-TR53
ET368048	3-TR54
ET368048	3-TR55
ET368048	3-TR60
ET368048	4-TR103
ET368048	4-TR113
ET368048	4-TR153
ET368048	5-TR201
ET368048	5-TR202
ET369248	19-TR803
ET376880	5-TR207
ET376880	18-TR701
ET378524J	4-TR112
ET378524J	4-TR116
ET378524J	4-TR117
ET378524J	4-TR118
ET378524J	4-TR119
ET378524J	4-TR162
ET378524J	5-TR213
ET378524J	5-TR216
ET378524J	5-TR217
ET378524J	5-TR220
ET378524J	8-TR104
ET378524J	9-TR154
ET378524J	18-TR703
ET378524J	18-TR704
ET394735J	11-TR101
ET394735J	11-TR102
ET394735J	11-TR103
ET394735J	11-TR104
ET394735J	11-TR105
ET394735J	11-TR108
ET394735J	11-TR151
ET394735J	11-TR152
ET394735J	11-TR153
ET394735J	11-TR154
ET394735J	11-TR155
ET394735J	11-TR158
ET397160J	14-TR309
ET397160J	14-TR310
ET397160J	16-TR502
ET397160J	16-TR504
ET397160J	19-TR804
ET403432J	20-PH851
ET403526J	8-TR106
ET403526J	9-TR156
ET403527J	5-TR212
ET403527J	8-TR107
ET403527J	9-TR157
ET415051J	4-TR110
ET415051J	4-TR111
ET415051J	4-TR160
ET415051J	4-TR161
ET415053J	4-TR108
ET415053J	4-TR109
ET415053J	4-TR158
ET415053J	4-TR159
ET415140J	11-TR183
ET415156J	5-TR205
ET415158J	5-TR206
EV401270J	14-VR301
EV401270J	14-VR302
EV416950J	14-VR303
EV415032M	16-VR501-A
EV415136J	12-SW201-A
EV415139J	16-VR501-B
EW408724M	22-4
EZ371605	22-33
EZ403425J	22-38
SA384105J	22-14
SB415182M	22-10
SB415339J	22-29
SE373237J1	22-30
SE373256	22-31
SE410963M	22-28
SE415340M	22-25
SE415347M	22-24
SK402898J	22-12
SK415178M	22-16
SK415180M	22-17
SK415338M	22-11
SK415349J	22-18
SM365756C	22-26
SM368416B	22-27
SP415336J	22-22-A
SP415341M1	22-1-A
SP415356J	22-22-B
SP415365M1	22-1-B
SP415469M1	22-19
SZ407213J	22-13
ZS304021	22-15
ZS346742	22-7
ZS358936	22-9
ZS361450	22-36
ZS371016	22-37
ZS385394J	22-2
ZS389961J	22-34
ZS389964J	22-20
ZS394412J	22-3
ZS404225J	22-21
ZW381273J	22-23
ZW403334	22-35
ZW410640J	22-8
ZW698308	22-32

ABBREVIATIONS (AMPLIFIER)

ABBREVIATION	EXPLANATION
A	Analog
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
COM	COMmon
D	Digital
D/A	Digital to Analog
DAC	Digital to Analog Converter
DAT	Digital Audio Tape recorder
DC	Direct Current
GND	GrouND
L	Left
LED	Light Emitting Diode
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
R	Right
REG	REGulator
REC	RECord
TR	TRansistor
SW	SWitch
V.AMP	Voltage AMPlifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder

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12-14, 2-Chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan
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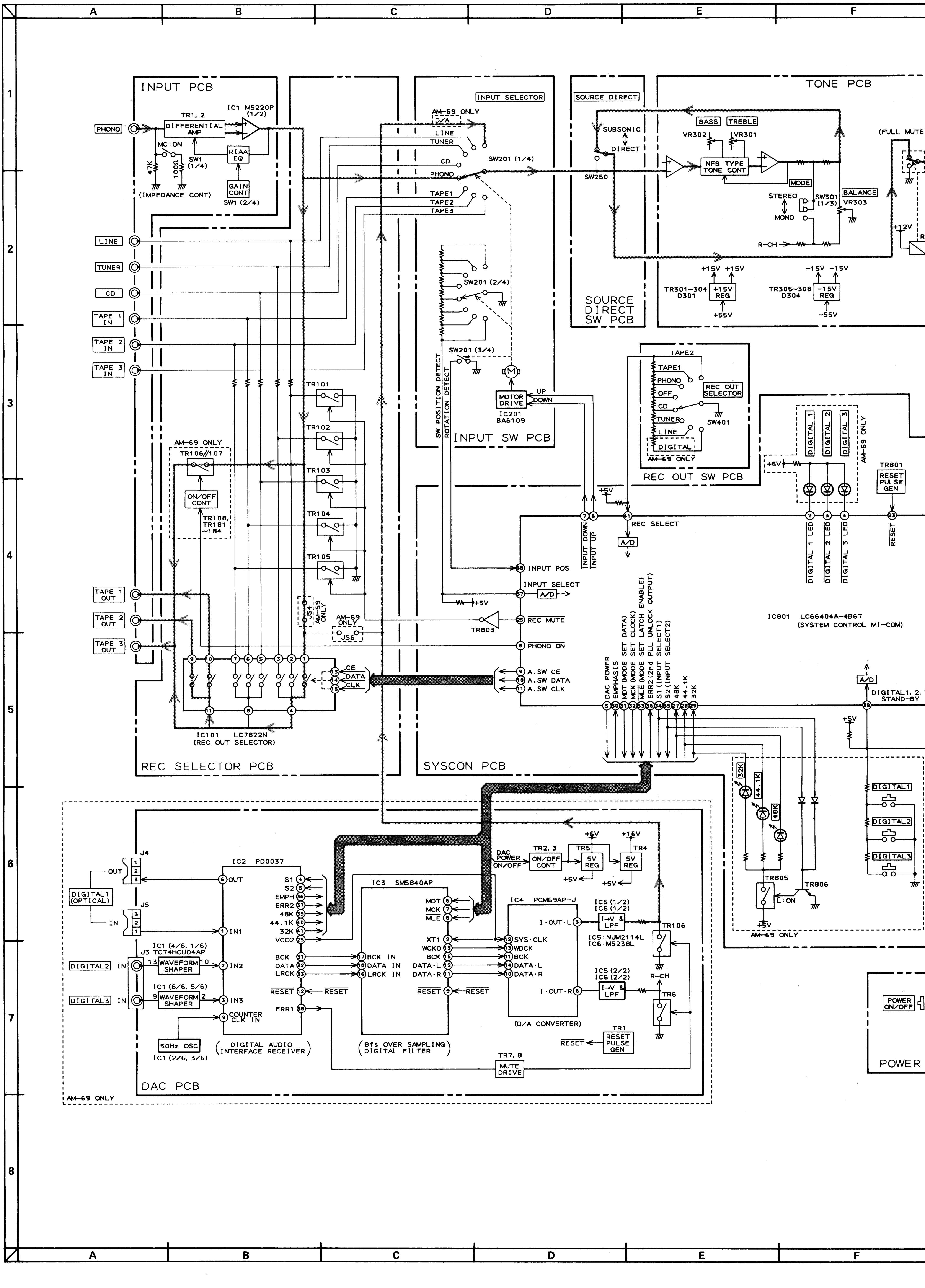
MODEL AM-59
MODEL AM-69

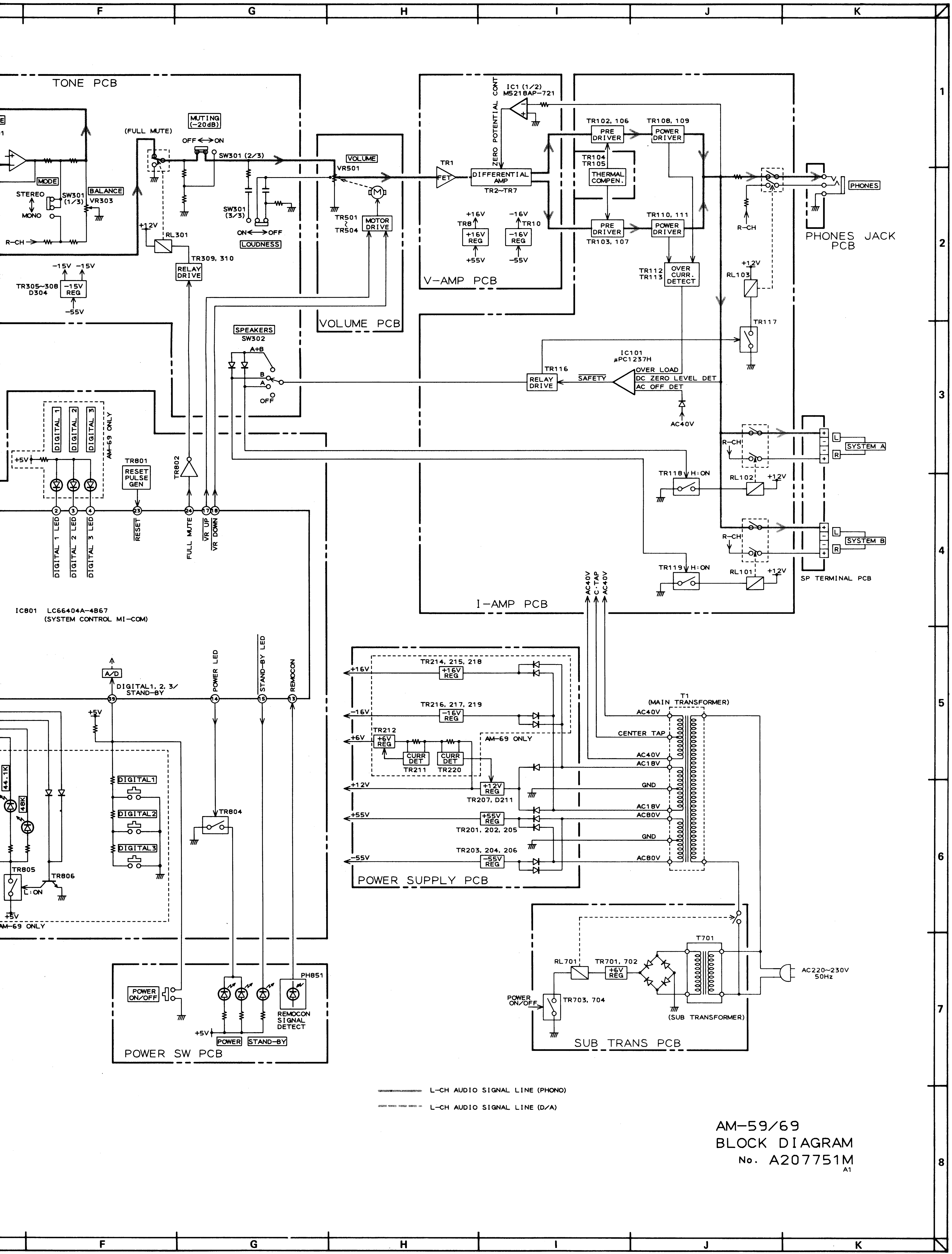
SCHEMATIC DIAGRAMS AND PC BOARDS

TABLE OF CONTENTS

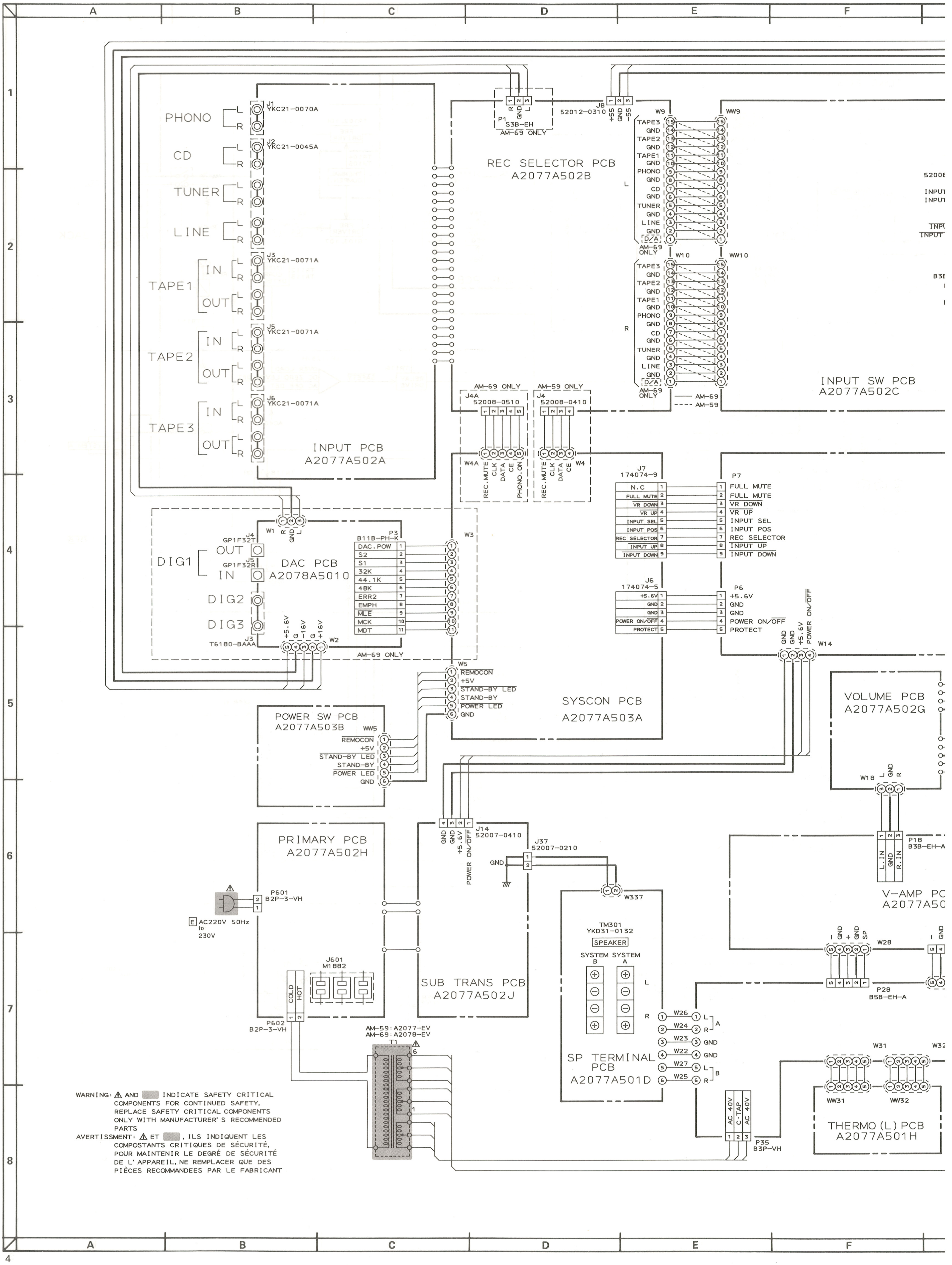
1. BLOCK DIAGRAM 3
2. CONNECTION DIAGRAM 4
3. TONE AND OTHER PC BOARDS 5
4. SYSCON AND OTHER PC BOARDS 6
5. PRE AMP & SYSCON SCHEMATIC DIAGRAM 7
6. POWER AMP SCHEMATIC DIAGRAM 8
7. V- AMP AND OTHER PC BOARDS 9
8. POWER SUPPLY SCHEMATIC DIAGRAM 10
9. POWER SUPPLY AND OTHER PC BOARDS 11
10. DAC SCHEMATIC DIAGRAM 12
11. DAC PC BOARD 13
12. INFORMATION OF ICs 14

Use these schematic diagrams and PC boards together with the provided service manual.


A
B
C
D
E
F
1
2
3
4
5
6
7
8
INPUT PCB
IC1 M5220P (1/2)
TR1, 2
DIFFERENTIAL AMP
PHONO
MC:ON
47K
100Ω
SW1 (1/4)
RIAA EQ
GAIN CONT
SW1 (2/4)
(IMPEDANCE CONT)
LINE
TUNER
CD
TAPE 1 IN
TAPE 2 IN
TAPE 3 IN
INPUT SELECTOR
AM-69 ONLY
D/A
LINE
TUNER
CD
PHONO
SW201 (1/4)
TAPE1
TAPE2
TAPE3
SW201 (2/4)
SW201 (3/4)
SW POSITION DETECT
ROTATION DETECT
MOTOR DRIVE
IC201 BA6109
UP
DOWN
INPUT SW PCB
SOURCE DIRECT
SUBSONIC
DIRECT
SW250
SOURCE DIRECT SW PCB
TONE PCB
BASS
TREBLE
VR302
VR301
NFB TYPE TONE CONT
MODE
STEREO
MONO
SW301 (1/3)
BALANCE
VR303
R-CH
+15V +15V
TR301~304 D301
+15V REG
+55V
−15V −15V
TR305~308 D304
−15V REG
−55V
(FULL MUTE
+12V
TAPE2
TAPE1
PHONO
OFF
CD
TUNER
LINE
DIGITAL
AM-69 ONLY
REC OUT SELECTOR
SW401
REC OUT SW PCB
DIGITAL 1
DIGITAL 2
DIGITAL 3
AM-69 ONLY
+5V
TR801
RESET PULSE GEN
DIGITAL 1 LED
DIGITAL 2 LED
DIGITAL 3 LED
RESET
TR101
TR102
TR103
TR104
TR105
AM-69 ONLY
TR106//107
ON/OFF CONT
TR108, TR181 ~184
TAPE 1 OUT
TAPE 2 OUT
TAPE 3 OUT
JS4 AM-59 ONLY
AM-69 ONLY
JS6
TR803
CE
DATA
CLK
IC101 LC7822N (REC OUT SELECTOR)
REC SELECTOR PCB
+5V
INPUT DOWN
INPUT UP
REC SELECT
A/D
INPUT POS
INPUT SELECT
A/D
REC MUTE
PHONO ON
A.SW CE
A.SW DATA
A.SW CLK
SYSCON PCB
IC801 LC66404A-4B67 (SYSTEM CONTROL MI-COM)
DAC POWER
EMPHASIS
MDT (MODE SET DATA)
MCK (MODE SET CLOCK)
MLE (MODE SET LATCH ENABLE)
ERR2 (2nd PLL UNLOCK OUTPUT)
S1 (INPUT SELECT1)
S2 (INPUT SELECT2)
48K
44.1K
32K
A/D
DIGITAL1, 2, STAND-BY
32K
44.1K
48K
TR805
L:ON
TR806
AM-69 ONLY
DIGITAL1
DIGITAL2
DIGITAL3
J4
OUT
DIGITAL1 (OPTICAL)
J5
IN
IC2 PD0037
OUT
IN1
S1
S2
EMPH
ERR2
48K
44.1K
32K
VCO2
BCK
DATA
LRCK
RESET
ERR1
IN2
IN3
COUNTER CLK IN
J3 IC1 (4/6, 1/6) TC74HCU04AP
DIGITAL2
DIGITAL3
WAVEFORM SHAPER
WAVEFORM SHAPER
50Hz OSC
IC1 (2/6, 3/6)
(DIGITAL AUDIO INTERFACE RECEIVER)
IC3 SM5840AP
MDT
MCK
MLE
XT1
WCKO
BCK
DATA·L
DATA·R
RESET
BCK IN
DATA IN
LRCK IN
(8fs OVER SAMPLING DIGITAL FILTER)
DAC POWER ON/OFF
TR2, 3
ON/OFF CONT
TR5
+6V
5V REG
+16V
TR4
5V REG
+5V
IC4 PCM69AP-J
SYS·CLK
WDCK
BCK
DATA·L
DATA·R
I·OUT·L
I·OUT·R
(D/A CONVERTER)
IC5 (1/2) IC6 (1/2)
I→V & LPF
IC5: NJM2114L
IC6: M5238L
IC5 (2/2) IC6 (2/2)
TR106
R-CH
TR6
TR1
RESET PULSE GEN
RESET
TR7, 8
MUTE DRIVE
DAC PCB
AM-69 ONLY
POWER ON/OFF
POWER

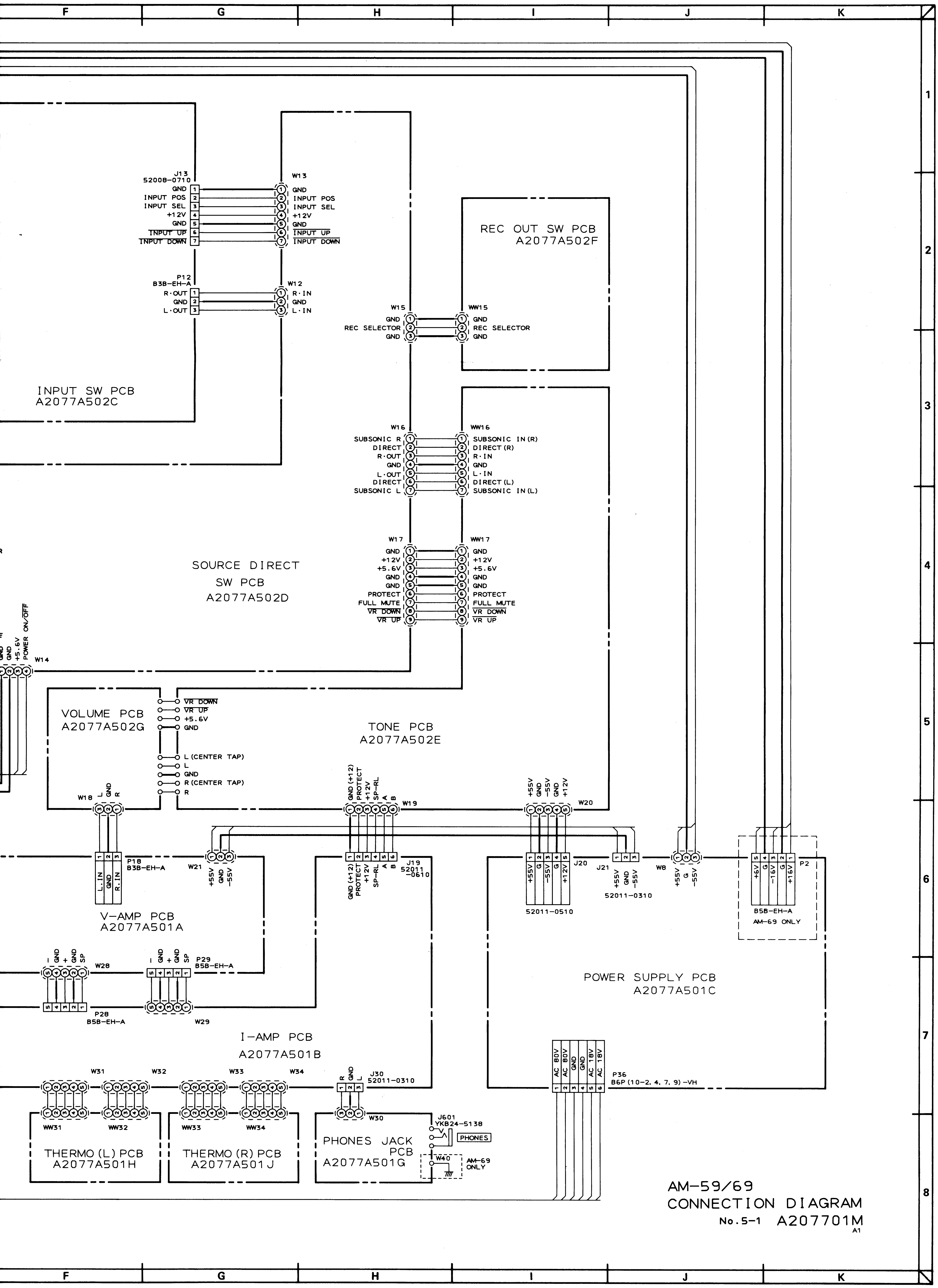

F
G
H
I
J
K
1
2
3
4
5
6
7
8
TONE PCB
MUTING (−20dB)
(FULL MUTE)
OFF ⟷ ON
SW301 (2/3)
MODE
STEREO
MONO
SW301 (1/3)
BALANCE
VR303
R−CH
+12V
RL301
TR309, 310
RELAY DRIVE
SW301 (3/3)
ON ⟷ OFF
LOUDNESS
−15V −15V
TR305~308 D304
−15V REG
−55V
VOLUME
VR501
TR501 ~ TR504
MOTOR DRIVE
VOLUME PCB
TR1
FET
ZERO POTENTIAL CONT
IC1 (1/2) M5218AP−721
DIFFERENTIAL AMP
TR2~TR7
+16V
TR8
+16V REG
+55V
−16V
TR10
−16V REG
−55V
V−AMP PCB
TR102, 106
PRE DRIVER
TR108, 109
POWER DRIVER
TR104 TR105
THERMAL COMPEN.
PRE DRIVER
TR103, 107
TR110, 111
POWER DRIVER
TR112 TR113
OVER CURR. DETECT
R−CH
PHONES
PHONES JACK PCB
+12V
RL103
TR117
SPEAKERS
SW302
A+B
B
A
OFF
IC101 μPC1237H
TR116
RELAY DRIVE
SAFETY
OVER LOAD
DC ZERO LEVEL DET
AC OFF DET
AC40V
DIGITAL 1
DIGITAL 2
DIGITAL 3
AM−69 ONLY
+5V
TR801
RESET PULSE GEN
TR802
R−CH
SYSTEM A
L
R
TR118 H:ON
RL102
+12V
R−CH
SYSTEM B
TR119 H:ON
RL101
+12V
SP TERMINAL PCB
I−AMP PCB
AC40V
C−TAP
AC40V
2
3
4
23
24
17
18
DIGITAL 1 LED
DIGITAL 2 LED
DIGITAL 3 LED
RESET
FULL MUTE
VR UP
VR DOWN
IC801 LC66404A−4B67 (SYSTEM CONTROL MI−COM)
A/D
DIGITAL1, 2, 3/ STAND−BY
39
14
15
13
POWER LED
STAND−BY LED
REMOCON
+5V
44.1K
48K
DIGITAL1
DIGITAL2
DIGITAL3
TR805
L:ON
TR806
+5V
AM−69 ONLY
TR804
POWER ON/OFF
PH851
REMOCON SIGNAL DETECT
+5V
POWER
STAND−BY
POWER SW PCB
+16V
TR214, 215, 218
+16V REG
−16V
TR216, 217, 219
−16V REG
+6V
TR212
+6V REG
CURR DET
TR211
CURR DET
TR220
AM−69 ONLY
+12V
+12V REG
TR207, D211
+55V
+55V REG
TR201, 202, 205
−55V
TR203, 204, 206
−55V REG
POWER SUPPLY PCB
T1 (MAIN TRANSFORMER)
AC40V
CENTER TAP
AC40V
AC18V
GND
AC18V
AC80V
GND
AC80V
T701
RL701
TR701, 702
+6V REG
POWER ON/OFF
TR703, 704
(SUB TRANSFORMER)
AC220~230V 50Hz
SUB TRANS PCB
L−CH AUDIO SIGNAL LINE (PHONO)
L−CH AUDIO SIGNAL LINE (D/A)

AM−59/69
BLOCK DIAGRAM
No. A207751M
A1


A
B
C
D
E
F
1
2
3
4
5
6
7
8
PHONO
CD
TUNER
LINE
TAPE1
TAPE2
TAPE3
IN
OUT
L
R
J1 YKC21-0070A
J2 YKC21-0045A
J3 YKC21-0071A
J5 YKC21-0071A
J6 YKC21-0071A
INPUT PCB
A2077A502A
P1 S3B-EH
AM-69 ONLY
J8 52012-0310
+5S
GND
-5S
REC SELECTOR PCB
A2077A502B
W9
WW9
W10
WW10
TAPE3
TAPE2
TAPE1
GND
D/A
AM-69 ONLY
INPUT SW PCB
A2077A502C
AM-69
AM-59
AM-69 ONLY
AM-59 ONLY
J4A 52008-0510
J4 52008-0410
W4A
W4
REC.MUTE
CLK
DATA
CE
PHONO.ON
J7 174074-9
P7
N.C
FULL MUTE
VR DOWN
VR UP
INPUT SEL
INPUT POS
REC SELECTOR
INPUT UP
INPUT DOWN
J6 174074-5
P6
+5.6V
POWER ON/OFF
PROTECT
W14
W1
GND
J4 GP1F32T
J5 GP1F32R
DIG1
DIG2
DIG3
DAC PCB
A2078A5010
J3 T6180-BAAA
P3 B11B-PH-K
DAC.POW
S2
S1
32K
44.1K
48K
ERR2
EMPH
MLE
MCK
MDT
W3
+5.6V
G
-16V
+16V
W2
AM-69 ONLY
W5
WW5
REMOCON
+5V
STAND-BY LED
STAND-BY
POWER LED
POWER SW PCB
A2077A503B
SYSCON PCB
A2077A503A
VOLUME PCB
A2077A502G
W18
P18 B3B-EH-A
L.IN
R.IN
V-AMP PC
A2077A50
PRIMARY PCB
A2077A502H
P601 B2P-3-VH
E AC220V 50Hz to 230V
J601 M1882
COLD
HOT
P602 B2P-3-VH
J14 52007-0410
J37 52007-0210
W337
SUB TRANS PCB
A2077A502J
AM-59:A2077-EV
AM-69:A2078-EV
T1
6
1
TM301 YKD31-0132
SPEAKER
SYSTEM B
SYSTEM A
W26
W24
W23
W22
W27
W25
SP TERMINAL PCB
A2077A501D
AC 40V
C.TAP
P35 B3P-VH
W28
P28 B5B-EH-A
SP
W31
W32
WW31
WW32
THERMO (L) PCB
A2077A501H
52008
INPUT
B3B

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


F
G
H
I
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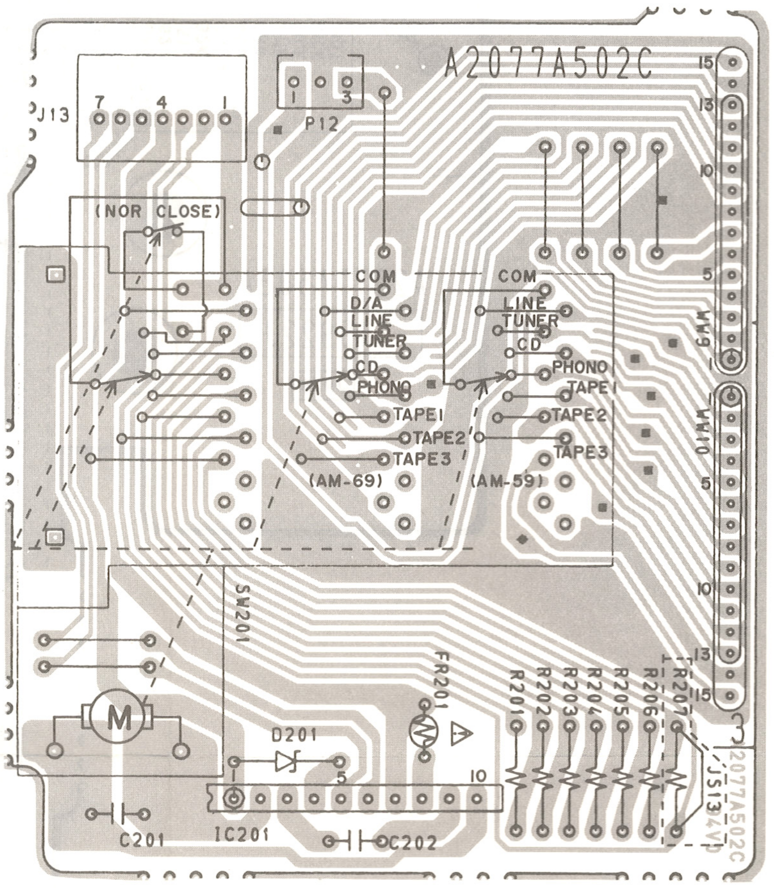
2
3
4
5
6
7
8
J13
52008-0710
GND
INPUT POS
INPUT SEL
+12V
GND
INPUT UP
INPUT DOWN
W13
GND
INPUT POS
INPUT SEL
+12V
GND
INPUT UP
INPUT DOWN
REC OUT SW PCB
A2077A502F
P12
B3B-EH-A
R·OUT
GND
L·OUT
W12
R·IN
GND
L·IN
W15
GND
REC SELECTOR
GND
WW15
GND
REC SELECTOR
GND
INPUT SW PCB
A2077A502C
W16
SUBSONIC R
DIRECT
R·OUT
GND
L·OUT
DIRECT
SUBSONIC L
WW16
SUBSONIC IN(R)
DIRECT (R)
R·IN
GND
L·IN
DIRECT (L)
SUBSONIC IN(L)
W17
GND
+12V
+5.6V
GND
GND
PROTECT
FULL MUTE
VR DOWN
VR UP
WW17
GND
+12V
+5.6V
GND
GND
PROTECT
FULL MUTE
VR DOWN
VR UP
SOURCE DIRECT
SW PCB
A2077A502D
GND
GND
+5.6V
POWER ON/OFF
W14
VOLUME PCB
A2077A502G
VR DOWN
VR UP
+5.6V
GND
L (CENTER TAP)
L
GND
R (CENTER TAP)
R
TONE PCB
A2077A502E
W18
L
GND
R
GND (+12)
PROTECT
+12V
SP-RL
A
B
W19
+55V
GND
-55V
GND
+12V
W20
P18
B3B-EH-A
L.IN
GND
R.IN
W21
+55V
GND
-55V
J19
52011-0610
GND (+12)
PROTECT
+12V
SP-RL
A
B
+55V
G
-55V
G
+12V
52011-0510
J20
J21
+55V
GND
-55V
52011-0310
W8
+55V
G
-55V
+6V
G
-16V
G
+16V
P2
B5B-EH-A
AM-69 ONLY
V-AMP PCB
A2077A501A
I
GND
+
GND
SP
W28
I
GND
+
GND
SP
P29
B5B-EH-A
P28
B5B-EH-A
W29
POWER SUPPLY PCB
A2077A501C
I-AMP PCB
A2077A501B
AC 80V
AC 80V
GND
GND
AC 18V
AC 18V
P36
B6P (10-2, 4, 7, 9) -VH
W31
W32
W33
W34
R
GND
L
J30
52011-0310
WW31
WW32
WW33
WW34
W30
J601
YKB24-5138
PHONES
THERMO (L) PCB
A2077A501H
THERMO (R) PCB
A2077A501J
PHONES JACK
PCB
A2077A501G
W40
AM-69
ONLY

AM-59/69
CONNECTION DIAGRAM
No.5-1 A207701M
A1


A2077A502C
J13
P12
(NOR CLOSE)
COM
D/A
LINE
TUNER
CD
PHONO
TAPE1
TAPE2
TAPE3
(AM-69)
(AM-59)
WW9
WW10
SW201
FR201
D201
IC201
C201
C202
R201
R202
R203
R204
R205
R206
R207
J513
M

INPUT SW PCB A2077A502C

PRINCIPAL PARTS LOCATION

TRANSISTORs

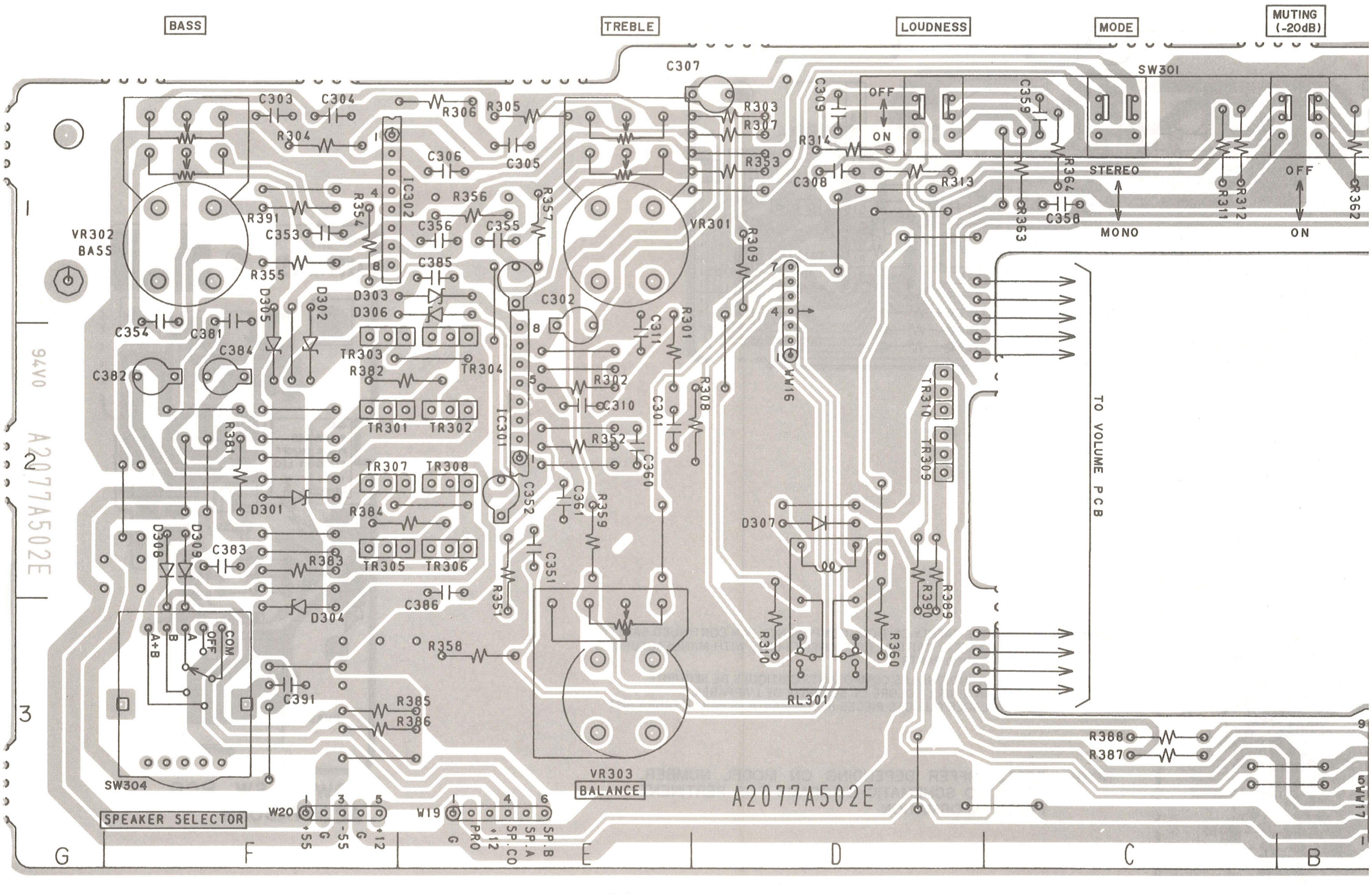
TR301	E,F2
TR302	E2
TR303	E,F2
TR304	E2
TR305	E,F2
TR306	E2
TR307	E,F2
TR308	E2
TR309	D2
TR310	D2

ICs

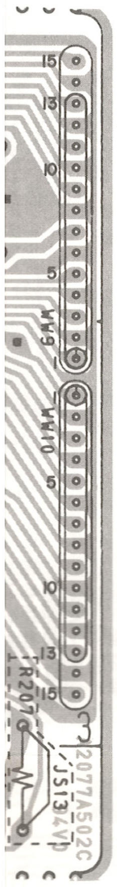
IC301	E2
IC302	E,F1

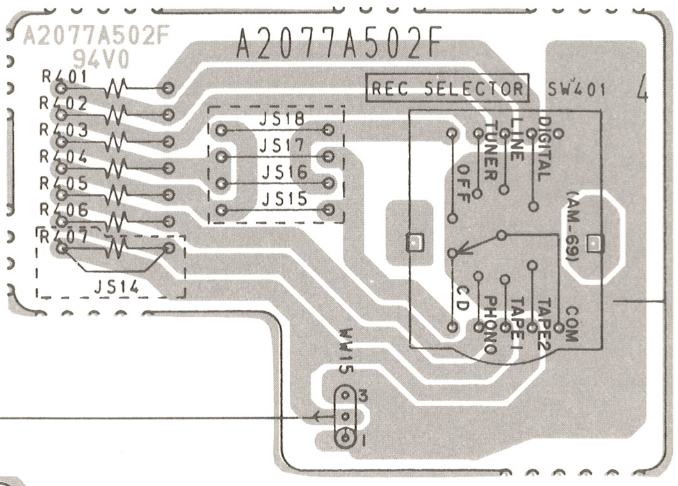
WIREs

W19	E3
W20	F3
WW16	D1,2
WW17	B3

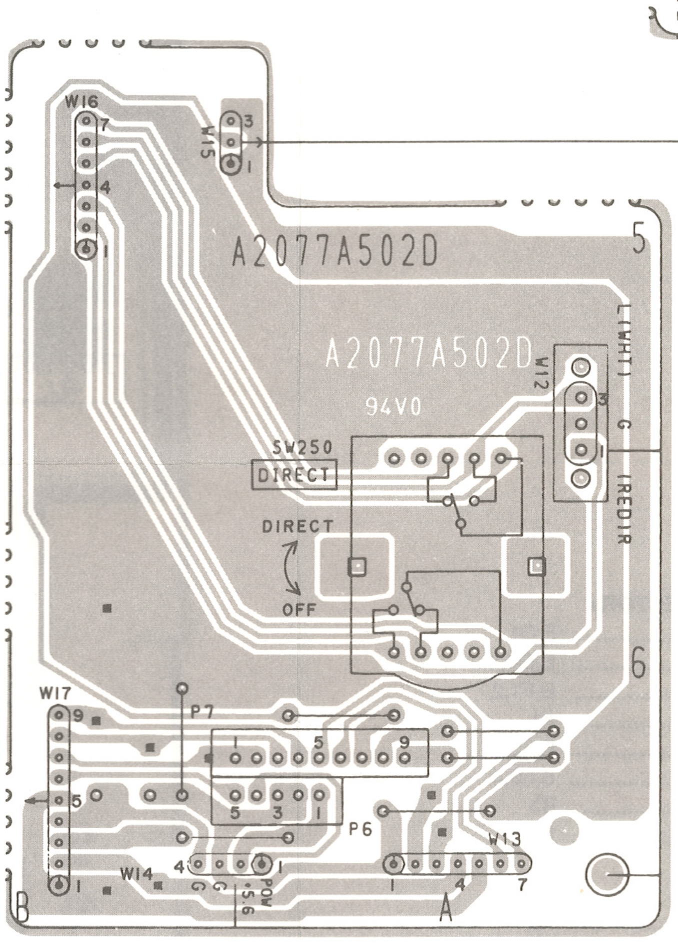

BASS
TREBLE
LOUDNESS
MODE
MUTING (-20dB)
VR302 BASS
VR301
VR303 BALANCE
IC301
IC302
SW301
SW304
SPEAKER SELECTOR
RL301
OFF
ON
STEREO
MONO
A+B
A
B
OFF
COM
TO VOLUME PCB
WW16
WW17
W19
W20
A2077A502E
94V0
TR301
TR302
TR303
TR304
TR305
TR306
TR307
TR308
TR309
TR310
G
F
E
D
C
B
1
2
3

TONE PCB A2077A502E


W9
W10
TR207
JS13
2077A502C
94V


A2077A502F
94V0
A2077A502F
R401
R402
R403
R404
R405
R406
R407
JS18
JS17
JS16
JS15
JS14
REC SELECTOR
SW401
4
DIGITAL
LINE
TUNER
OFF
(AM-69)
CD
PHONO
TAPE1
TAPE2
COM
W15
3
1

REC OUT SW PCB
A2077A502F

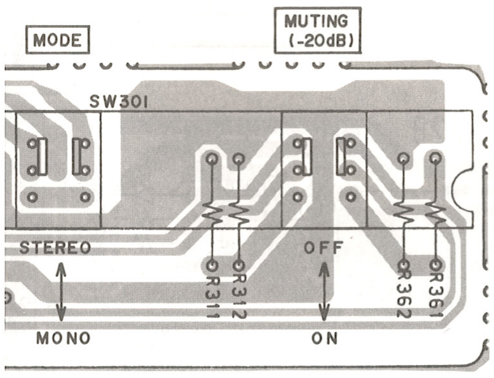

W16
7
4
1
W15
3
1
A2077A502D
5
A2077A502D
94V0
W12
L(WHT)
G
(RED)R
SW250
DIRECT
DIRECT
OFF
6
W17
9
5
1
P7
1
5
9
5
3
1
P6
W13
1
4
7
W14
4
G
G
POW
+5.6
B
A

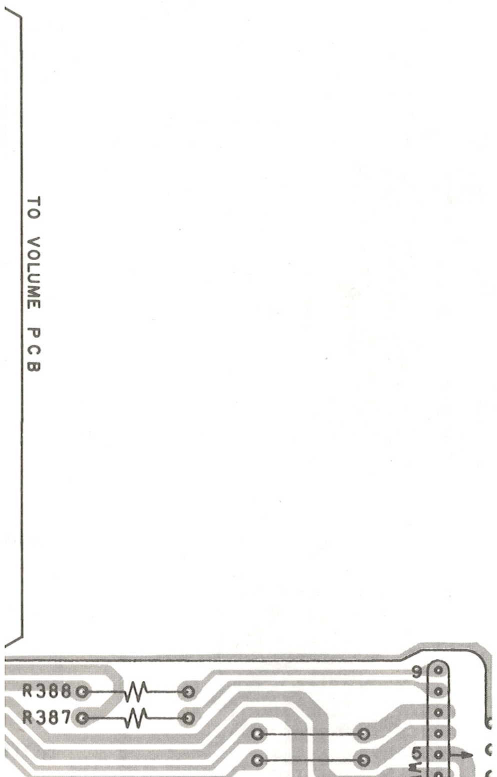
SOURCE DIRECT SW PCB
A2077A502D

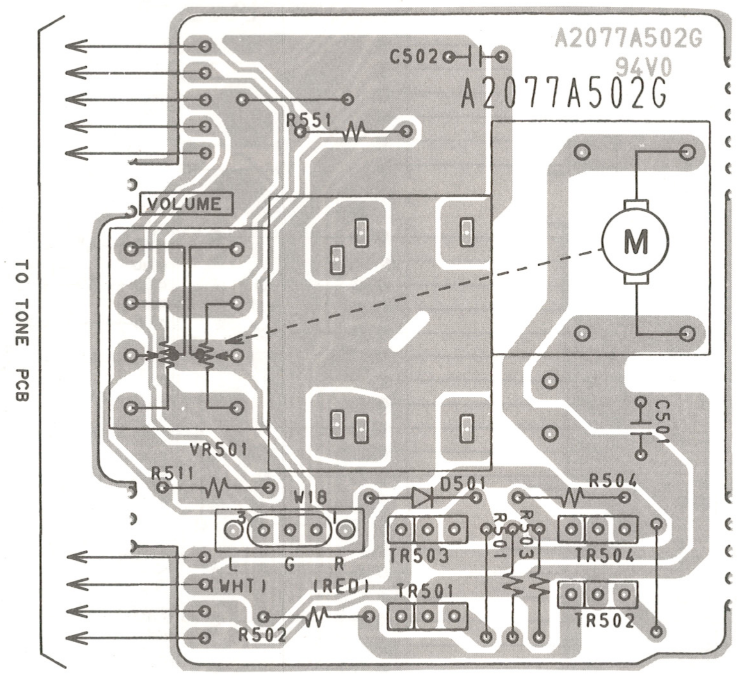
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


MODE
MUTING
(-20dB)
SW301
STEREO
MONO
R311
R312
OFF
ON
R362
R361


TO VOLUME PCB
R388
R387
9
5
1
W17
C
B


A2077A502G
94V0
A2077A502G
C502
R551
VOLUME
M
TO TONE PCB
VR501
C501
R511
W18
D501
R504
R501
R503
L
G
R
(WHT)
(RED)
TR503
TR504
TR501
TR502
R502

VOLUME PCB
A2077A502G

PRINCIPAL PARTS LOCATION

TRANSISTORs

TR1	G1,2
TR2	G2
TR51	F1,2
TR52	F2
TR101	C2,3
TR102	C4
TR103	C2,3
TR104	C2,3
TR105	C2,3
TR106	C2
TR107	C2
TR108	C2
TR151	C3
TR152	C3
TR153	C3
TR154	C3
TR155	C3
TR156	C3
TR157	C3
TR158	C4
TR181	A1
TR182	A1
TR183	A1
TR184	A1

ICs

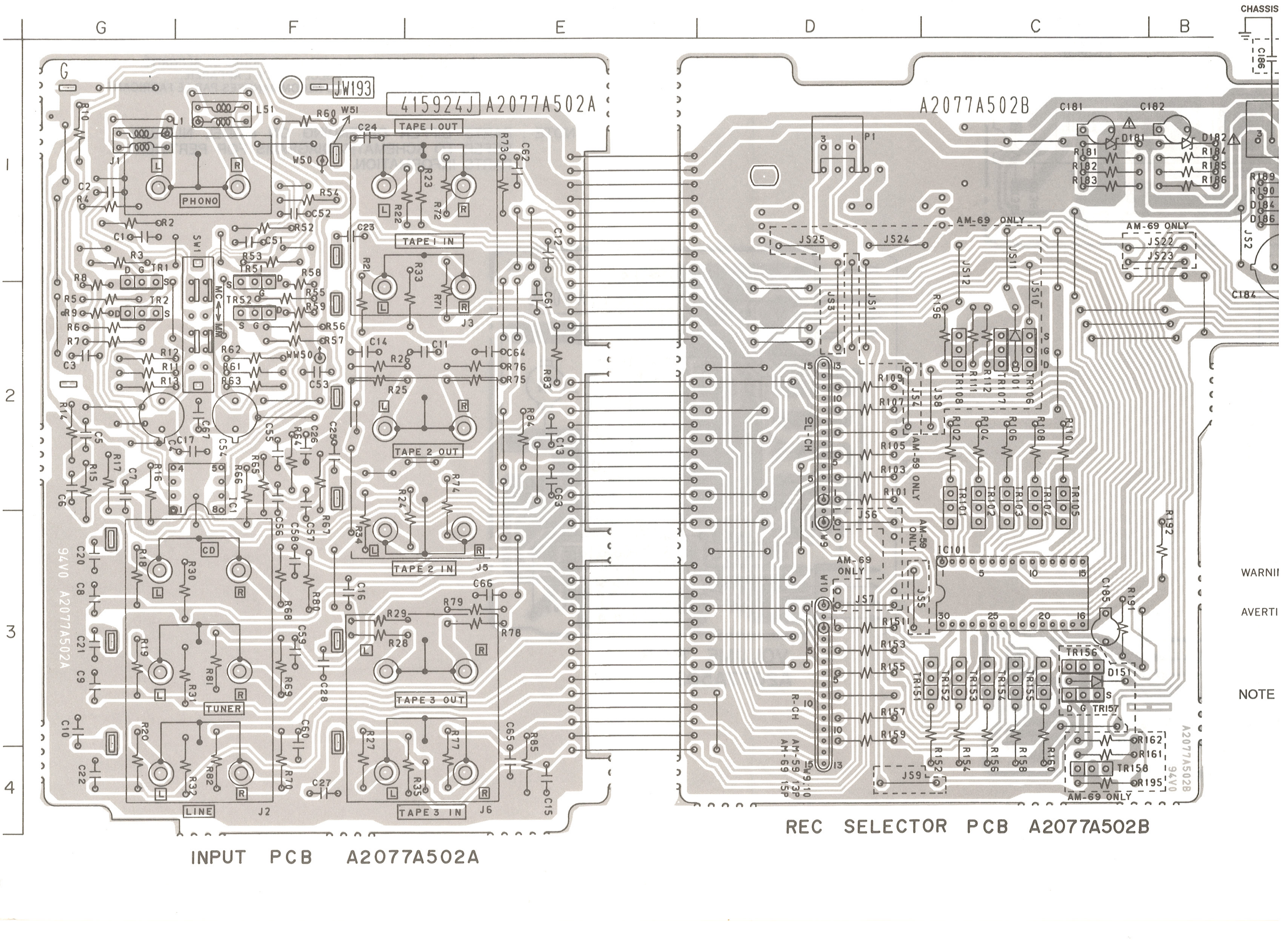
IC1	F2
IC101	C3

CONNECTORs

J1	F,G1
J2	E,G3,4
J3	E,F1,2
J4	A1
J5	E,F2,3
J6	E,F3,4
J8	B1
P1	D1

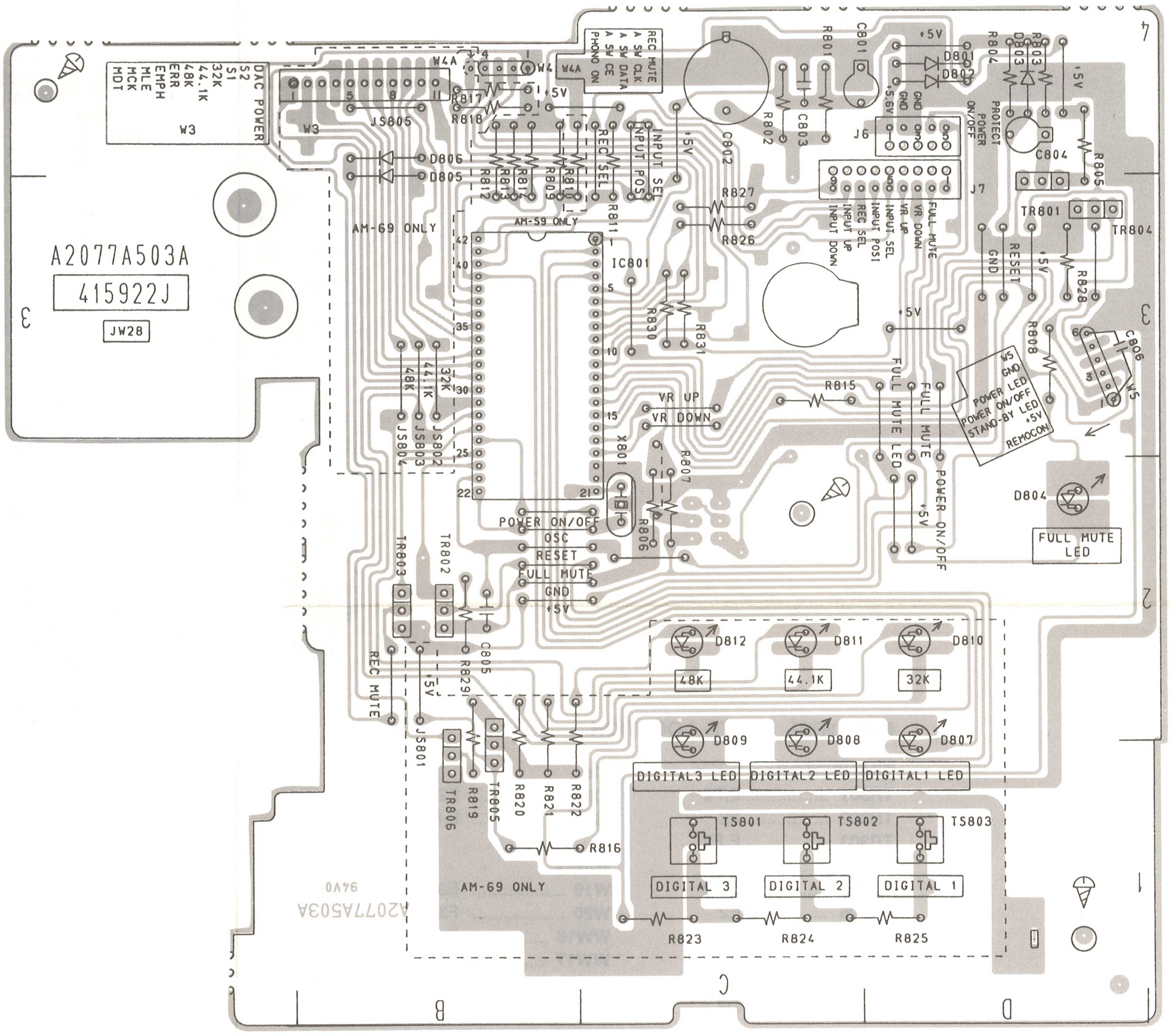
WIREs

W9	D2
W10	D3
W50	F1,2

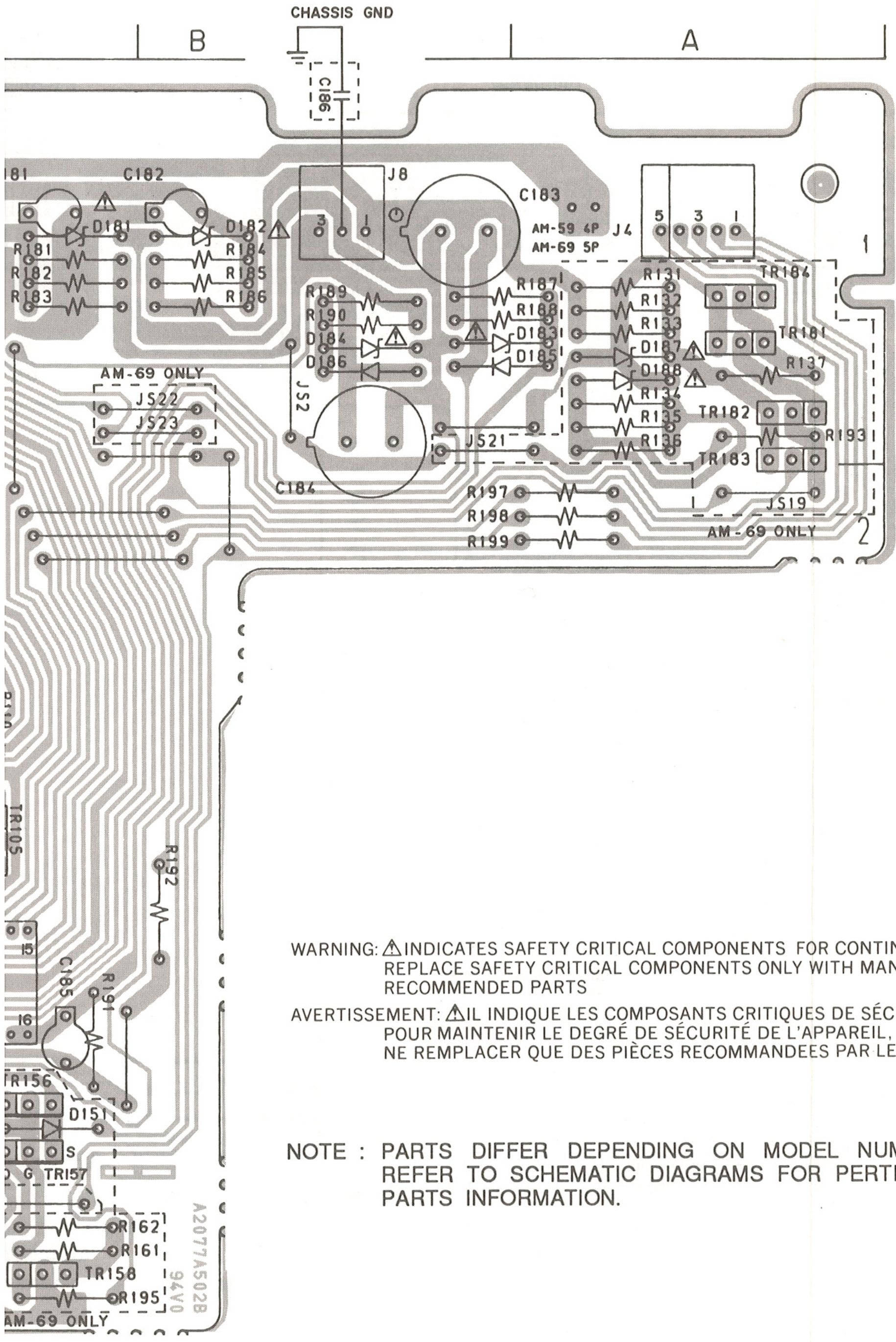

G
F
E
D
C
B
1
2
3
4
CHASSIS
415924J A2077A502A
A2077A502B
JW193
PHONO
TAPE 1 OUT
TAPE 1 IN
TAPE 2 OUT
TAPE 2 IN
TAPE 3 OUT
TAPE 3 IN
CD
TUNER
LINE
AM-69 ONLY
AM-59 ONLY
L-CH
R-CH
IC101
94V0
WARNI
AVERTI
NOTE

REC SELECTOR PCB A2077A502B

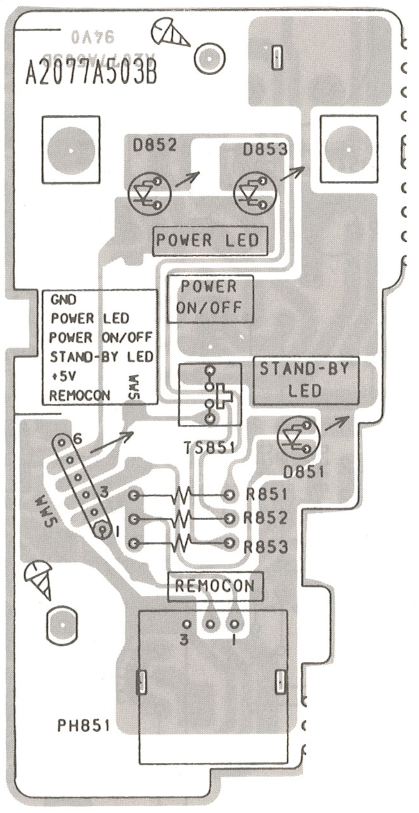
INPUT PCB A2077A502A


A2077A503A
415922J
JW28
DAC POWER
W3
W4A
W4
JS805
D806
D805
AM-69 ONLY
AM-59 ONLY
IC801
X801
R806
R807
R815
R826
R827
R830
R831
J6
J7
C804
C806
TR801
TR804
TR802
TR803
TR805
TR806
JS801
JS802
JS803
JS804
D804
FULL MUTE LED
POWER ON/OFF
OSC
RESET
FULL MUTE
GND
+5V
REC MUTE
VR UP
VR DOWN
D812
D811
D810
48K
44.1K
32K
D809
D808
D807
DIGITAL3 LED
DIGITAL2 LED
DIGITAL1 LED
TS801
TS802
TS803
DIGITAL 3
DIGITAL 2
DIGITAL 1
R816
R819
R820
R821
R822
R823
R824
R825
R829
C805
W5
REMOCON
STAND-BY LED
POWER LED
B
C
D

SYSCON PCB A2077A503A


CHASSIS GND
B
A
C186
C182
C183
C184
C185
J8
J4
JS2
AM-59 4P
AM-69 5P
TR184
TR181
TR182
TR183
JS19
JS21
JS22
JS23
AM-69 ONLY
R197
R198
R199
R192
R191
TR156
TR157
TR158
D151
R162
R161
R195
A2077A502B

77A502B

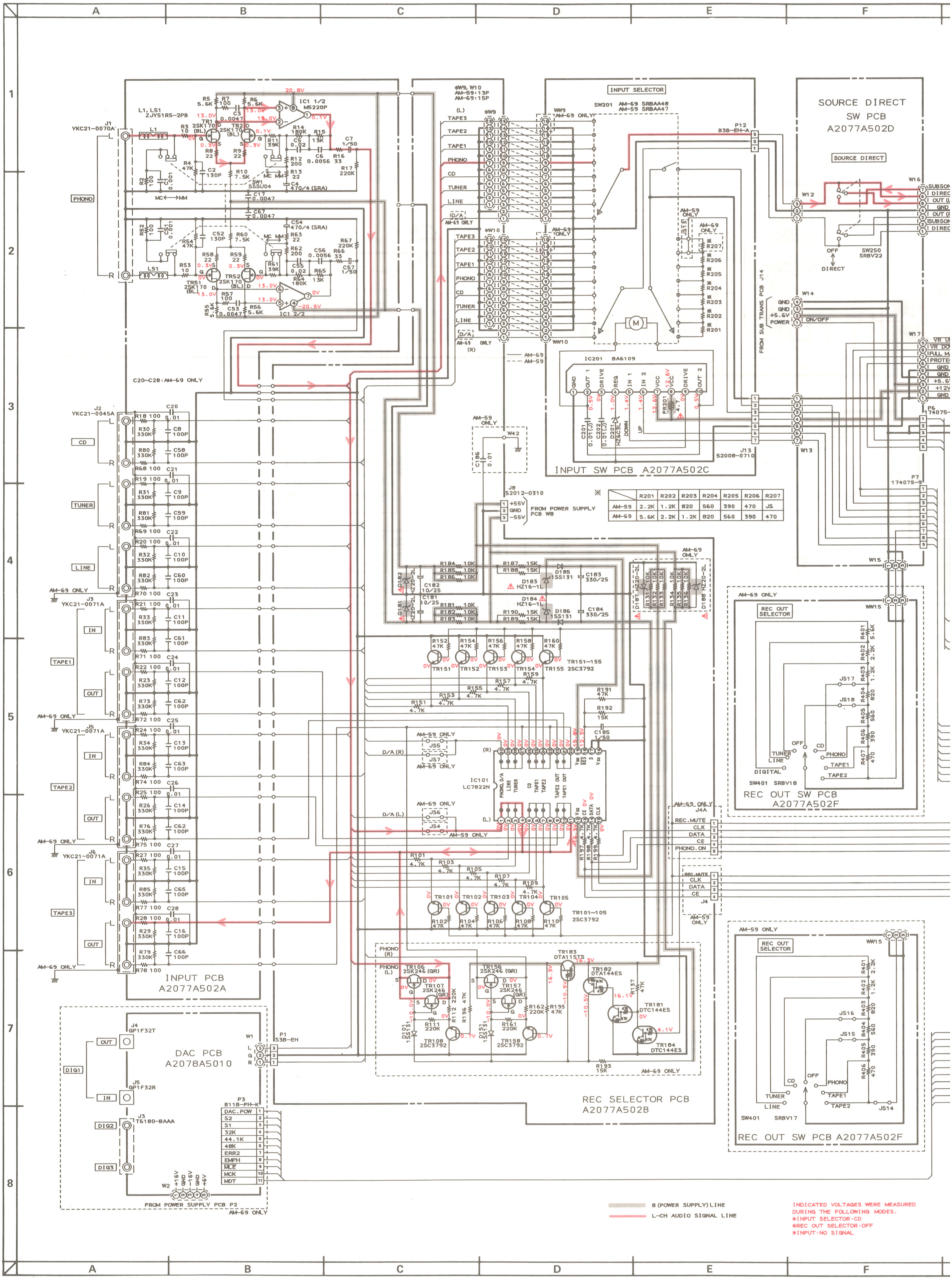

A2077A503B
D852
D853
POWER LED
POWER ON/OFF
GND
POWER LED
POWER ON/OFF
STAND-BY LED
+5V
REMOCON
STAND-BY LED
TS851
D851
W5
R851
R852
R853
REMOCON
PH851

POWER SW PCB
A2077A503B

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

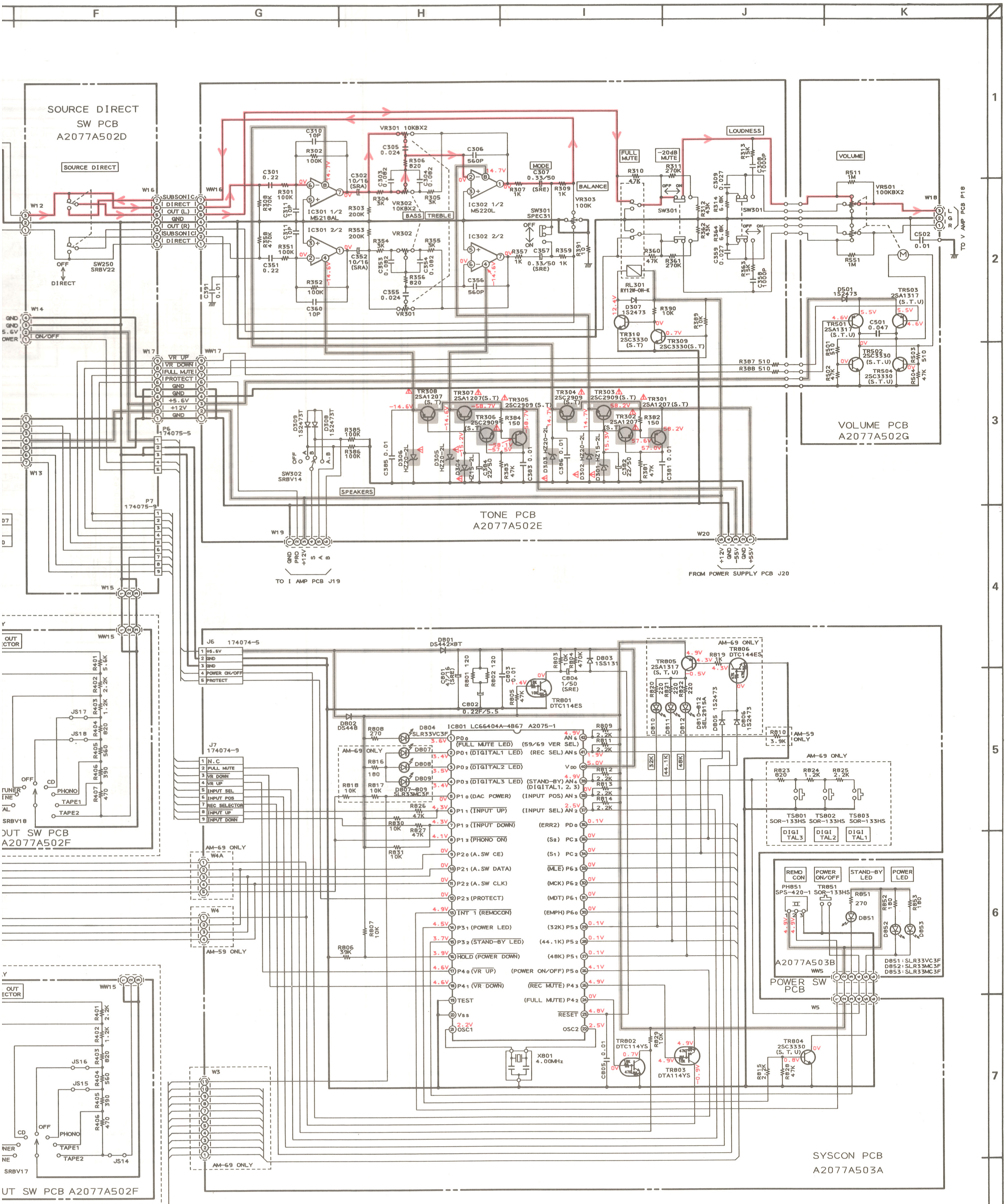

A
B
C
D
E
F
1
2
3
4
5
6
7
8
INPUT PCB A2077A502A
REC SELECTOR PCB A2077A502B
INPUT SW PCB A2077A502C
SOURCE DIRECT SW PCB A2077A502D
SOURCE DIRECT
REC OUT SW PCB A2077A502F
DAC PCB A2078A5010
INPUT SELECTOR
SW201 AM-69 SRBAA48 AM-59 SRBAA47
IC1 1/2 M5220P
IC1 2/2
IC101 LC7822N
IC201 BA6109
PHONO
CD
TUNER
LINE
TAPE1
TAPE2
TAPE3
IN
OUT
DIG1
DIG2
DIG3
D/A
MC
MM
SW1 SSSU04
J1 YKC21-0070A
J2 YKC21-0045A
J3 YKC21-0071A
J5 YKC21-0071A
J6 YKC21-0071A
L1, L51 ZJY51R5-2PB
C20~C28:AM-69 ONLY
AM-59 ONLY
AM-69 ONLY
J8 52012-0310
+55V
GND
-55V
FROM POWER SUPPLY PCB W8
J13 52008-0710
P12 B3B-EH-A
FROM SUB TRANS PCB J14
GND
+5.6V
POWER
ON/OFF
SW250 SRBV22
OFF
DIRECT
TR151~155 2SC3792
TR101~105 2SC3792
TR106 2SK246 (GR)
TR107 2SK246 (GR)
TR156 2SK246 (GR)
TR157 2SK246 (GR)
TR108 2SC3792
TR158 2SC3792
TR183 DTA115TS
TR182 DTA144ES
TR181 DTC144ES
TR184 DTC144ES
REC.MUTE
CLK
DATA
CE
PHONO.ON
J4A
J4
REC OUT SELECTOR
SW401 SRBV18
SW401 SRBV17
DIGITAL
J4 GP1F32T
J5 GP1F32R
J3 T6180-BAAA
P1 S3B-EH
P3 B11B-PH-K
DAC.POW
S2
S1
32K
44.1K
48K
ERR2
EMPH
MCE
MCK
MDT
W2
+16V
GND
-16V
GND
+6V
FROM POWER SUPPLY PCB P2
AM-69 ONLY

	R201	R202	R203	R204	R205	R206	R207
AM-59	2.2K	1.2K	820	560	390	470	JS
AM-69	5.6K	2.2K	1.2K	820	560	390	470

B (POWER SUPPLY) LINE

L-CH AUDIO SIGNAL LINE

INDICATED VOLTAGES WERE MEASURED DURING THE FOLLOWING MODES.
*INPUT SELECTOR:CD
*REC OUT SELECTOR:OFF
*INPUT:NO SIGNAL


F
G
H
I
J
K
1
2
3
4
5
6
7
8
SOURCE DIRECT
SW PCB
A2077A502D
SOURCE DIRECT
W12
W16
WW16
SUBSONIC
DIRECT
OUT (L)
GND
OUT (R)
SUBSONIC
DIRECT
OFF
DIRECT
SW250
SRBV22
W14
GND
GND
5.6V
POWER
ON/OFF
W17
WW17
VR UP
VR DOWN
FULL MUTE
PROTECT
GND
GND
+5.6V
+12V
GND
P6
174075-5
W13
P7
174075-9
W15
WW15
C310 10P
R302 100K
C301 0.22
R301 100K
R308 470K
IC301 1/2 M5218AL
IC301 2/2
C302 10/16 (SRA)
R303 200K
R353 200K
R304 3K
VR301 10KBX2
C305 0.024
R306 820
C304 0.082
C303 0.082
R305 3K
VR302 10KBX2
BASS
TREBLE
C306 560P
IC302 1/2 M5220L
IC302 2/2
R307 1K
C307 0.33/50 (SRE)
R309 1K
MODE
BALANCE
SW301 SPEC31
VR303 100K
R351 100K
C351 0.22
R358 470K
C311 10P
C391 0.01
C352 10/16 (SRA)
R354 3K
R355 3K
VR302
C353 0.082
C354 0.082
R356 820
C355 0.024
VR301
R352 100K
C360 10P
C356 560P
R357 1K
C357 0.33/50 (SRE)
R359 1K
R391 10K
FULL MUTE
-20dB MUTE
R310 4.7K
R311 270K
SW301
LOUDNESS
R313 15K
C308 1000P
C309 0.027
R312 43K
R314 6.8K
R362 43K
R364 6.8K
C359 0.027
R360 47K
R361 270K
R363 15K
C358 1000P
RL301 RY12W-OH-K
D307 1S2473
R390 10K
R389 10K
TR310 2SC3330 (S.T)
TR309 2SC3330(S.T)
VOLUME
R511 1M
VR501 100KBX2
W18
L
G
R
TO V AMP PCB P18
C502 0.01
R551 1M
M
D501 1S2473
TR503 2SA1317 (S.T.U)
TR501 2SA1317 (S.T.U)
C501 0.047
TR502 2SC3330 (S.T.U)
TR504 2SC3330 (S.T.U)
R501 510
R502 47K
R503 510
R504 47K
R387 510
R388 510
VOLUME PCB
A2077A502G
TR308 2SA1207 (S.T)
TR307 2SA1207(S.T)
TR305 2SC2909 (S.T)
TR306 2SC2909 (S.T)
R384 150
TR304 2SC2909 (S.T)
TR303 2SC2909(S.T)
TR301 2SA1207(S.T)
TR302 2SA1207 (S.T)
R382 150
D309 1S2473T
D308 1S2473T
R385 100K
R386 100K
OFF
A
B
A,B
SW302 SRBV14
SPEAKERS
C385 0.01
D306 HZ20-2L
D305 HZ20-2L
D304 HZ15-2L
C384 22/50
R383 47K
C383 0.01
D303 HZ20-2L
C386 0.01
D302 HZ20-2L
D301 HZ15-2L
C382 22/50
R381 47K
C381 0.01
TONE PCB
A2077A502E
W19
GND
PRO
+12V
S
A
B
TO I AMP PCB J19
W20
+12V
GND
-55V
GND
+55V
FROM POWER SUPPLY PCB J20
OUT
SELECTOR
R401 5.6K
R402 2.2K
R403 1.2K
R404 820
R405 560
R406 390
R407 470
JS17
JS18
OFF
CD
PHONO
TUNER
LINE
TAPE1
TAPE2
SRBV18
OUT SW PCB
A2077A502F
J6 174074-5
+5.6V
GND
GND
POWER ON/OFF
PROTECT
D801 DS442XBT
C801 47/16 (SRE)
R801 120
R802 120
C803 0.01
R803 10K
R804 470K
D803 1SS131
C804 1/50 (SRE)
R805 47K
TR801 DTC114ES
C802 0.22F/5.5
AM-69 ONLY
TR805 2SA1317 (S, T, U)
R819 1K
TR806 DTC144ES
R820 220
R821 220
R822 220
D810 ~812 SEL2913A
D805 1S2473
D806 1S2473
D810
D811
D812
D802 DS448
R808 270
D804 SLR33VC3F
IC801 LC66404A-4867 A2075-1
AM-69 ONLY
R816 180
D807
D808
D809
R818 10K
R817 10K
D807~809 SLR33MC3F
R826 47K
R830 10K
R827 47K
R831 10K
P00 (FULL MUTE LED)
P01 (DIGITAL1 LED)
P02 (DIGITAL2 LED)
P03 (DIGITAL3 LED)
P10 (DAC POWER)
P11 (INPUT UP)
P12 (INPUT DOWN)
P13 (PHONO ON)
P20 (A.SW CE)
P21 (A.SW DATA)
P22 (A.SW CLK)
P23 (PROTECT)
INT 1 (REMOCON)
P31 (POWER LED)
P32 (STAND-BY LED)
HOLD (POWER DOWN)
P40 (VR UP)
P41 (VR DOWN)
TEST
Vss
OSC1
(59/69 VER SEL) AN6
(REC SEL) AN5
VDD
(STAND-BY) AN4
(DIGITAL1, 2, 3)
(INPUT POS) AN3
(INPUT SEL) AN2
(ERR2) PD0
(S2) PC3
(S1) PC2
(MLE) P63
(MCK) P62
(MDT) P61
(EMPH) P60
(32K) P53
(44.1K) P52
(48K) P51
(POWER ON/OFF) P50
(REC MUTE) P43
(FULL MUTE) P42
RESET
OSC2
R809 2.2K
R811 2.2K
R812 2.2K
R813 2.2K
R814 2.2K
32K
44.1K
48K
R810 3.9K
AM-59 ONLY
AM-69 ONLY
R823 820
R824 1.2K
R825 2.2K
TS801 SOR-133HS
TS802 SOR-133HS
TS803 SOR-133HS
DIGI TAL3
DIGI TAL2
DIGI TAL1
REMO CON
POWER ON/OFF
STAND-BY LED
POWER LED
PH851 SPS-420-1
TR851 SOR-133HS
R851 270
D851
R852 180
R853 180
D852
D853
A2077A503B
WW5
POWER SW PCB
D851:SLR33VC3F
D852:SLR33MC3F
D853:SLR33MC3F
W5
J7 174074-9
N.C
FULL MUTE
VR DOWN
VR UP
INPUT SEL
INPUT POS
REC SELECTOR
INPUT UP
INPUT DOWN
AM-69 ONLY
W4A
W4
AM-59 ONLY
R807 10K
R806 39K
X801 4.00MHz
C805 0.01
TR802 DTC114YS
R829 10K
TR803 DTA114YS
TR804 2SC3330 (S, T, U)
R815 2.2K
R828 47K
W3
AM-69 ONLY
SYSCON PCB
A2077A503A
R401 2.2K
R402 1.2K
R403 820
R404 560
R405 390
R406 470
JS16
JS15
JS14
CD
OFF
PHONO
TUNER
LINE
TAPE1
TAPE2
SRBV17
OUT SW PCB A2077A502F
14.7V
-14.6V
0V
12.4V
5.5V
4.6V
0.7V
58.2V
-58.7V
-57.5V
57.6V
57.0V
4.9V
4.3V
-0.5V
3.6V
3.4V
4.1V
2.2V
0.1V
4.8V
2.5V
1.9V
5.0V
0.9V
-0.9V

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

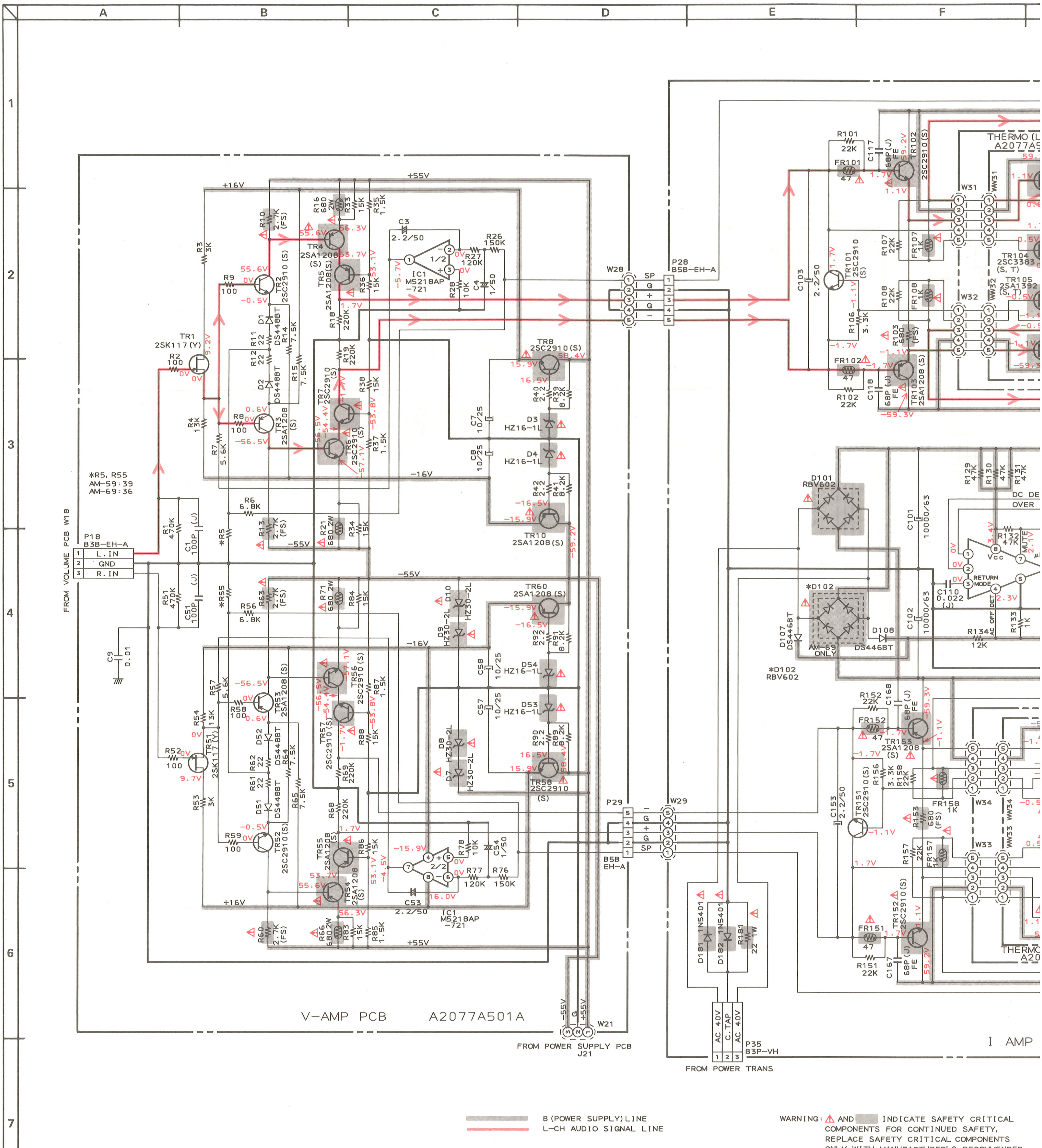
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF(J) (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)

INDICATED VOLTAGES WERE MEASURED DURING THE FOLLOWING MODES.
*INPUT SELECTOR:CD
*REC OUT SELECTOR:OFF
*INPUT:NO SIGNAL

AM-59/69
PRE AMP & SYSCON SCHEMATIC DIAGRAM

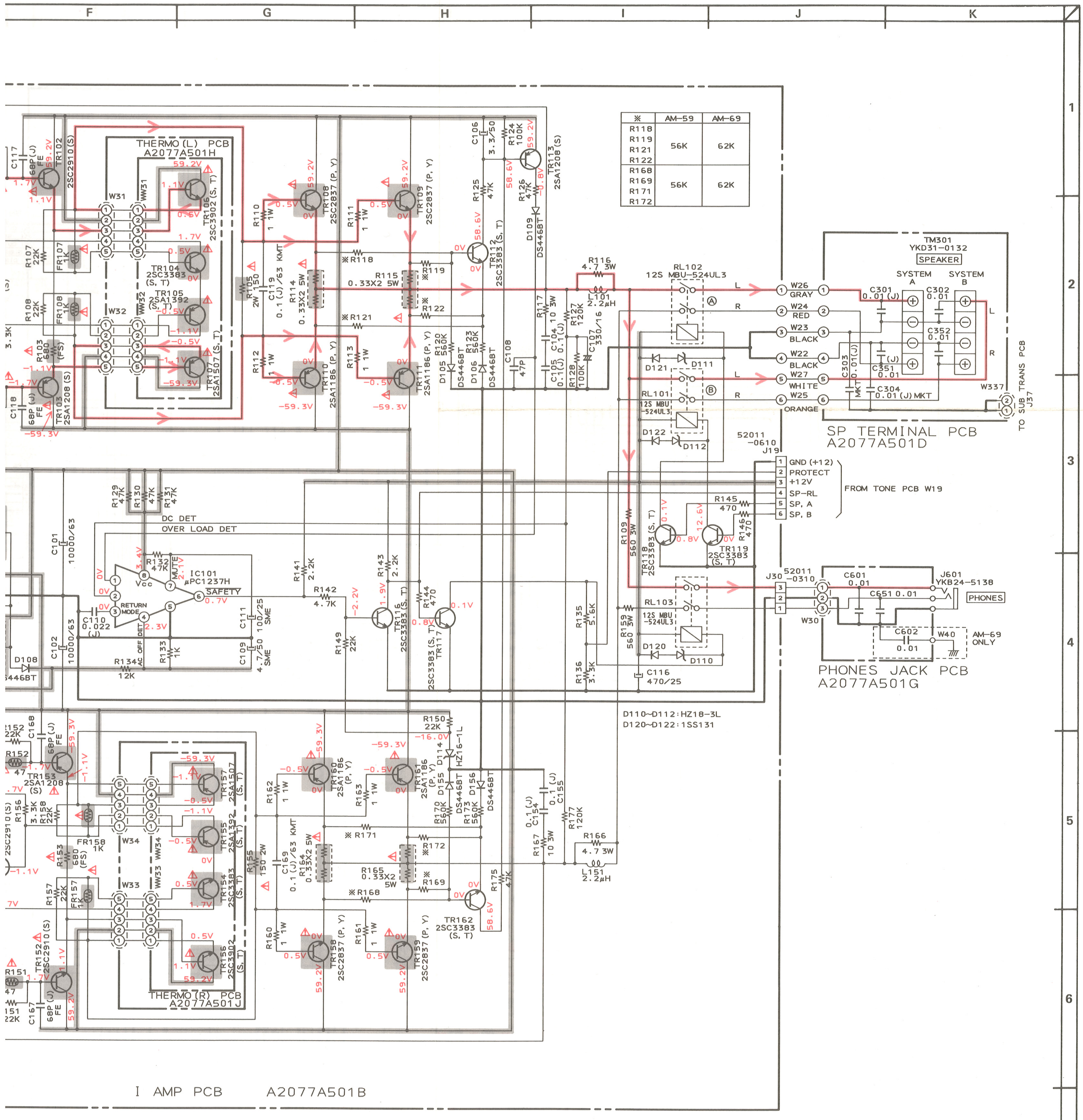
No.5-2 A207702M

A0


A
B
C
D
E
F
1
2
3
4
5
6
7
8
FROM VOLUME PCB W18
P18
B3B-EH-A
L.IN
GND
R.IN
*R5, R55
AM-59:39
AM-69:36
R1 470K
C1 100P (J)
*R5
R6 6.8K
R51 470K
C51 100P (J)
*R55
R56 6.8K
C9 0.01
TR1 2SK117(Y)
R2 100
R3 3K
R4 13K
R7 5.6K
R8 100
R9 100
R10 2.7K (FS)
R11 22
R12 22
R13 2.7K (FS)
R14 7.5K
R15 7.5K
D1 DS446BT
D2 DS446BT
TR2 2SC2910(S)
TR3 2SA1208(S)
TR4 2SA1208(S)
TR5 2SA1208(S)
TR6 2SC2910(S)
TR7 2SC2910(S)
TR8 2SC2910(S)
TR10 2SA1208(S)
R16 680 2W
R33 15K
R35 1.5K
R36 15K
R18 220K
R19 220K
R38 15K
R37 1.5K
R21 680 2W
R34 15K
C3 2.2/50
IC1 M5218AP-721
1/2
R26 150K
R27 120K
R28 10K
C4 1/50
C7 10/25
C8 10/25
D3 HZ16-1L
D4 HZ16-1L
R39 8.2K
R40 2.2
R41 8.2K
R42 2.2
+16V
+55V
-16V
-55V
TR51 2SK117(Y)
R52 100
R53 3K
R54 13K
R57 5.6K
R58 100
R59 100
R60 2.7K (FS)
R61 22
R62 22
R63 2.7K (FS)
R64 7.5K
R65 7.5K
D51 DS446BT
D52 DS446BT
TR52 2SC2910(S)
TR53 2SA1208(S)
TR54 2SA1208(S)
TR55 2SA1208(S)
TR56 2SC2910(S)
TR57 2SC2910(S)
TR58 2SC2910(S)
TR60 2SA1208(S)
R66 680 2W
R83 15K
R85 1.5K
R86 15K
R68 220K
R69 220K
R88 15K
R87 1.5K
R71 680 2W
R84 15K
C53 2.2/50
IC1 M5218AP-721
2/2
R76 150K
R77 120K
R78 10K
C54 1/50
C57 10/25
C58 10/25
D53 HZ16-1L
D54 HZ16-1L
D7 HZ30-2L
D8 HZ30-2L
D9 HZ30-2L
D10 HZ30-2L
R89 8.2K
R90 2.2
R91 8.2K
R92 2.2
V-AMP PCB A2077A501A
W21
-55V
G
+55V
FROM POWER SUPPLY PCB J21
W28
SP
P28
B5B-EH-A
P29
B5B EH-A
W29
D181 1N5401
D182 1N5401
R181 22 1W
AC 40V
C.TAP
AC 40V
P35
B3P-VH
FROM POWER TRANS
R101 22K
FR101 47
C117 68P(J)
FE
TR102 2SC2910(S)
THERMO (L)
A2077A5
W31
WW31
R107 22K
FR107 1K
TR104 2SC3383 (S, T)
TR105 2SA1392 (S, T)
C103 2.2/50
TR101 2SC2910 (S)
R108 22K
FR108 1K
R106 3.3K
W32
WW32
R103 680 (FS)
FR102 47
C118 68P(J)
FE
TR103 2SA1208(S)
R102 22K
D101 RBV602
*D102
D107 DS446BT
D108 DS446BT
AM-69 ONLY
*D102 RBV602
C101 10000/63
C102 10000/63
R129 47K
R130 47K
R131 47K
DC DE
OVER
R132 47K
MUTE
Vcc
RETURN MODE
DET
AC OFF
C110 0.022 (J)
R133 1K
R134 12K
R152 22K
C168 68P(J)
FE
FR152 47
TR153 2SA1208(S)
R156 3.3K
R158 22K
FR158 1K
W34
WW34
TR151 2SC2910(S)
C153 2.2/50
R153 680 (FS)
W33
WW33
R157 22K
FR157 1K
TR152 2SC2910(S)
FR151 47
R151 22K
C167 68P(J)
FE
THERMO
A20
I AMP
55.6V
56.3V
53.7V
53.1V
55.6V
0V
-0.5V
9.2V
0V
0V
0.6V
0V
-56.5V
-56.5V
-54.4V
-57.1V
-53.8V
-1.7V
1.7V
-5.7V
0V
0V
15.9V
58.4V
16.5V
-16.5V
-15.9V
-59.2V
-56.5V
0V
0.6V
0V
9.7V
-0.5V
0V
-56.5V
-54.4V
-57.1V
-53.8V
-1.7V
1.7V
53.1V
53.7V
55.6V
56.3V
-15.9V
-4.5V
0V
16.0V
-15.9V
-16.5V
16.5V
15.9V
58.4V
59.2V
1.7V
1.1V
-1.7V
-1.1V
-1.7V
-1.1V
-1.7V
-59.3V
3.4V
2.1V
0V
0V
0V
2.3V
59.3V
-1.7V
-1.1V
-1.7V
-1.1V
1.7V
1.1V
59.2V
B (POWER SUPPLY) LINE
L-CH AUDIO SIGNAL LINE

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


F
G
H
I
J
K
1
2
3
4
5
6
THERMO (L) PCB
A2077A501H
THERMO (R) PCB
A2077A501J
TR102 2SC2910 (S)
TR103 2SA1208 (S)
TR104 2SC3383 (S, T)
TR105 2SA1392 (S, T)
TR106 2SC3902 (S, T)
TR107 2SA1507 (S, T)
TR108 2SC2837 (P, Y)
TR109 2SC2837 (P, Y)
TR110 2SA1186 (P, Y)
TR111 2SA1186 (P, Y)
TR112 2SC3383 (S, T)
TR113 2SA1208 (S)
W31
WW31
W32
WW32
R110 1 1W
R111 1 1W
R112 1 1W
R113 1 1W
R105 150 2W
C119 0.1 (J)/63 KMT
R114 0.33X2 5W
R115 0.33X2 5W
※R118
※R119
※R121
※R122
R116 4.7 3W
L101 2.2μH
R117 10 3W
R127 120K
R128 100K
C107 330/16
C105 0.1 (J)
C104 0.1 (J)
C108 47P
C106 3.3/50
R124 100K
R125 47K
R126 4.7K
D105 DS446BT
D106 DS446BT
D109 DS446BT
R120 560K
R123 560K
59.2V
58.6V
-59.3V
0.5V
-0.5V
0V
1.1V
-1.1V
1.7V
-1.7V
RL102
12S MBU-524UL3
RL101
12S MBU -524UL3
D111
D112
D121
D122
Ⓐ
Ⓑ
L
R
W26 GRAY
W24 RED
W23 BLACK
W22 BLACK
W27 WHITE
W25 ORANGE
TM301
YKD31-0132
SPEAKER
SYSTEM A
SYSTEM B
C301 0.01 (J)
C302 0.01
C352 0.01
C303 0.01(J) MKT
C351 0.01 (J)
C304 0.01 (J) MKT
W337
TO SUB TRANS PCB J37
SP TERMINAL PCB
A2077A501D
52011 -0610
J19
GND (+12)
PROTECT
+12V
SP-RL
SP, A
SP, B
FROM TONE PCB W19
R129 47K
R130 47K
R131 47K
DC DET
OVER LOAD DET
C101 10000/63
C102 10000/63
IC101
μPC1237H
Vcc
RETURN MODE
MUTE
SAFETY
DET
OFF
AC
R132 47K
R133 1K
R134 12K
C110 0.022 (J)
C111 100/25 SME
C109 4.7/50 SME
D108
DS446BT
R141 2.2K
R142 4.7K
R143 2.2K
R144 470
R149 22K
TR116 2SC3383 (S, T)
TR117 2SC3383 (S, T)
R145 470
R146 470
R109 560 3W
TR118 2SC3383 (S, T)
TR119 2SC3383 (S, T)
R135 5.6K
R136 3.3K
R159 560 3W
C116 470/25
RL103
12S MBU -524UL3
D110
D120
52011 -0310
J30
W30
C601 0.01
C651 0.01
C602 0.01
W40
AM-69 ONLY
J601
YKB24-5138
PHONES
PHONES JACK PCB
A2077A501G
D110~D112: HZ18-3L
D120~D122: 1SS131
R150 22K
-16.0V
D114 HZ16-1L
D155 DS446BT
D156 DS446BT
C154 0.1 (J)
C155 0.1 (J)
R167 10 3W
R177 120K
R166 4.7 3W
L151 2.2μH
R170 560K
R173 560K
R175 47K
TR162 2SC3383 (S, T)
TR160 2SA1186 (P, Y)
TR161 2SA1186 (P, Y)
TR158 2SC2837 (P, Y)
TR159 2SC2837 (P, Y)
R162 1 1W
R163 1 1W
R160 1 1W
R161 1 1W
R155 150 2W
C169 0.1 (J)/63 KMT
R164 0.33X2 5W
R165 0.33X2 5W
※R171
※R172
※R168
※R169
TR151 2SA1507 (S, T)
TR155 2SA1392 (S, T)
TR154 2SC3383 (S, T)
TR156 2SC3902 (S, T)
TR152 2SC2910 (S)
TR153 2SA1208 (S)
W34
WW34
W33
WW33
FR158 1K
R158 22K
R156 3.3K
R153 680 (FS)
R157 22K
FR157 1K
C168 68P (J) FE
C167 68P (J) FE
R152 47
R151 47
I AMP PCB
A2077A501B

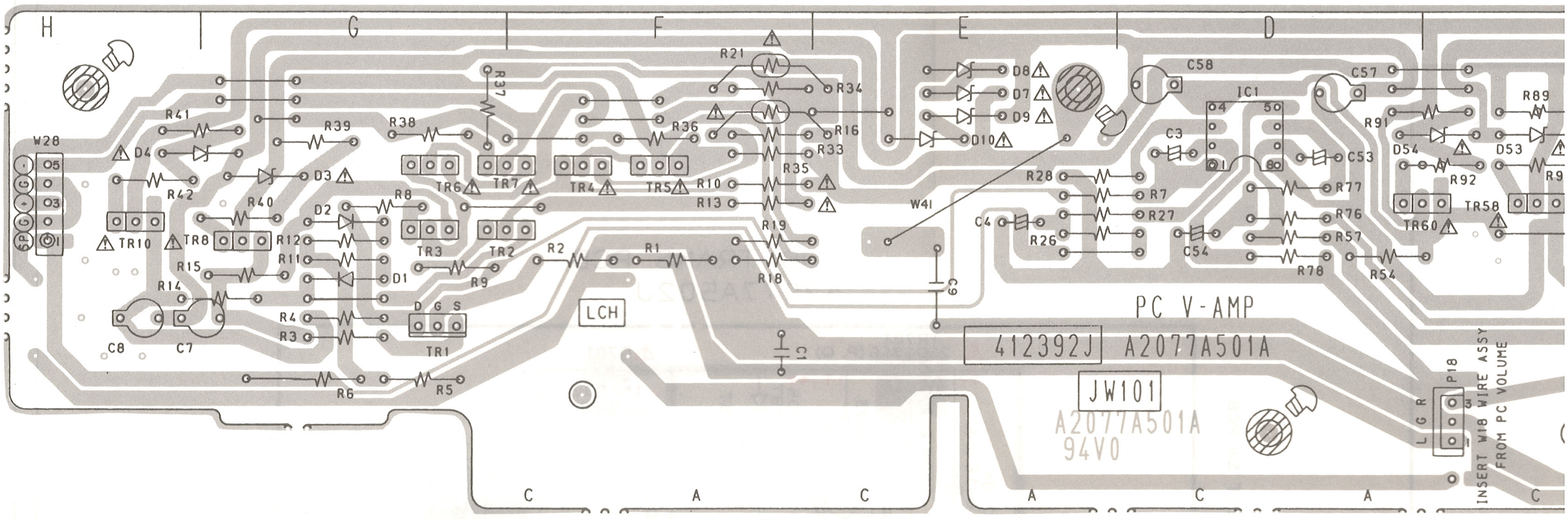
※	AM-59	AM-69
R118 R119 R121 R122	56K	62K
R168 R169 R171 R172	56K	62K

▨ INDICATE SAFETY CRITICAL
NTS FOR CONTINUED SAFETY,
SAFETY CRITICAL COMPONENTS
TH MANUFACTURER'S RECOMMENDED

ET ▨, ILS INDIQUENT LES
ANTS CRITIQUES DE SÉCURITÉ,
INTENIR LE DEGRÉ DE SÉCURITÉ
PAREIL, NE REMPLACER QUE DES
RECOMMANDEES PAR LE FABRICANT

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF (P=PF) 50WV
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M) AS-1

AM-59/69
POWER AMP
SCHEMATIC DIAGRAM
No. 5-3 A207703M
A1


H
G
F
E
D
PC V-AMP
412392J A2077A501A
JW101
A2077A501A
94V0
LCH
W28
W41
IC1
INSERT W18 WIRE ASSY FROM PC VOLUME
C
A
C
A
C
A
C

V- AMP PCB A2077A501A

WARNING: ⚠IND
REPLA
RECO
AVERTISSEMENT
POUR
NE RE

PRINCIPAL PARTS LOCATION

ICs

IC101	A2

CONNECTORs

J19	D2
J30	E2
P28	A2
P35	C2

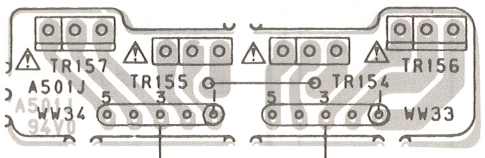
TRANSISTORs

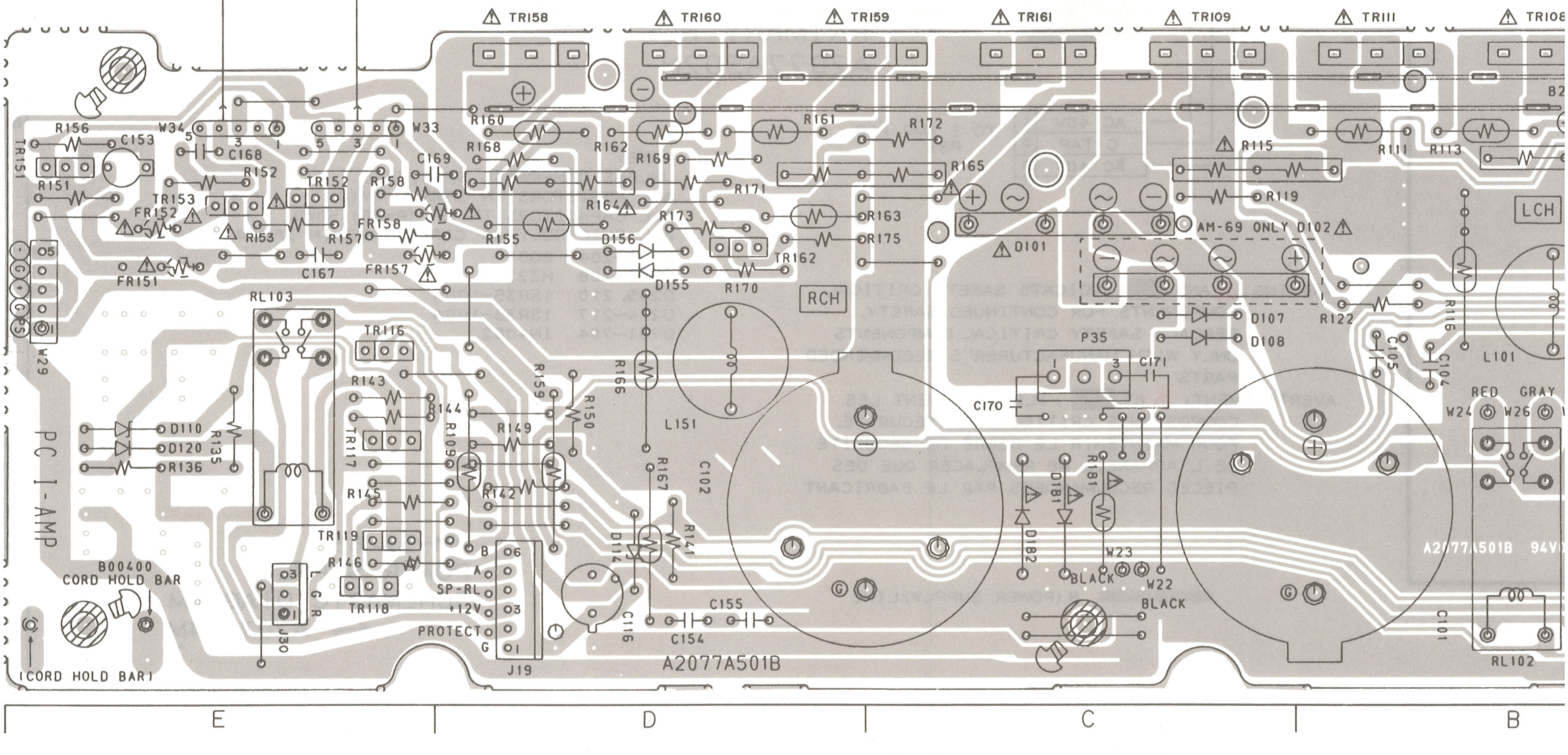
TR101	A2
TR102	A1
TR103	A1
TR108	B1
TR109	C1
TR110	B1
TR111	B1
TR112	A1
TR113	A2
TR116	E1,2
TR117	E2
TR118	E2
TR119	E2
TR151	E1
TR152	E1
TR153	E1
TR158	D1
TR159	C,D1
TR160	D1
TR161	C1
TR162	D1

WIREs

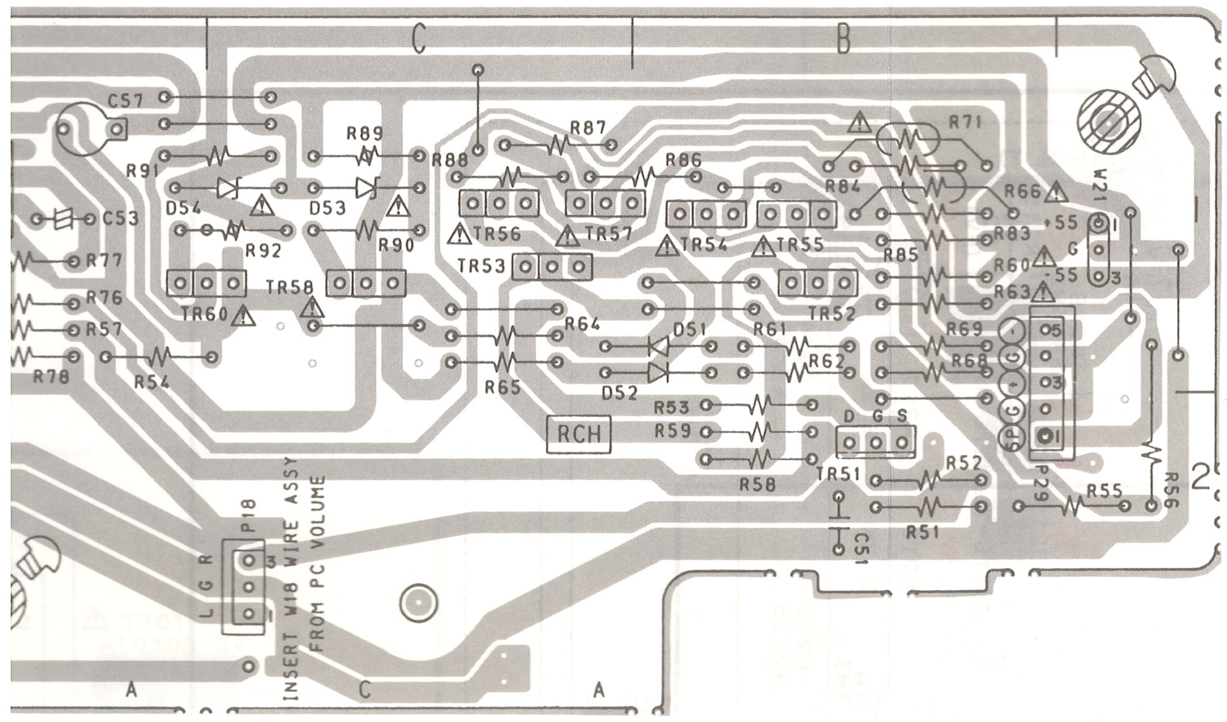
W22	C2
W23	C2
W24	B2
W25	B2
W26	B2
W27	B2
W29	E1
W31	A1
W32	A1
W33	E1
W34	E1
W37	A2

THERMO(R) PCB
A2077A501J


TR157
TR155
TR154
TR156
A501J
94V0
W34
WW33


TR158
TR160
TR159
TR161
TR109
TR111
TR108
PC I-AMP
RCH
LCH
AM-69 ONLY D102
RL103
RL102
L151
L101
P35
J19
J30
B00400 CORD HOLD BAR
CORD HOLD BAR
SP-RL
+12V
PROTECT
RED
GRAY
BLACK
A2077A501B
A2077A501B 94V0
E
D
C
B

I- AMP PCB A2077A501B


C57
R89
R87
R86
R71
R91
D54
D53
R88
R84
R66
W21
C53
R92
R90
TR56
TR57
TR54
TR55
R83
+55
G
-55
R77
TR53
R85
R60
R76
TR58
TR60
TR52
R63
R57
R64
D51
R61
R69
R78
R54
R65
R62
R68
D52
R53
RCH
R59
D G S
R58
TR51
R52
P29
R56
R55
R51
C51
L G R
P18
INSERT W18 WIRE ASSY FROM PC VOLUME
A
C
A
C
B
2

PRINCIPAL PARTS LOCATION

CONNECTORs

P18	C2
P29	A,B1,2

WIREs

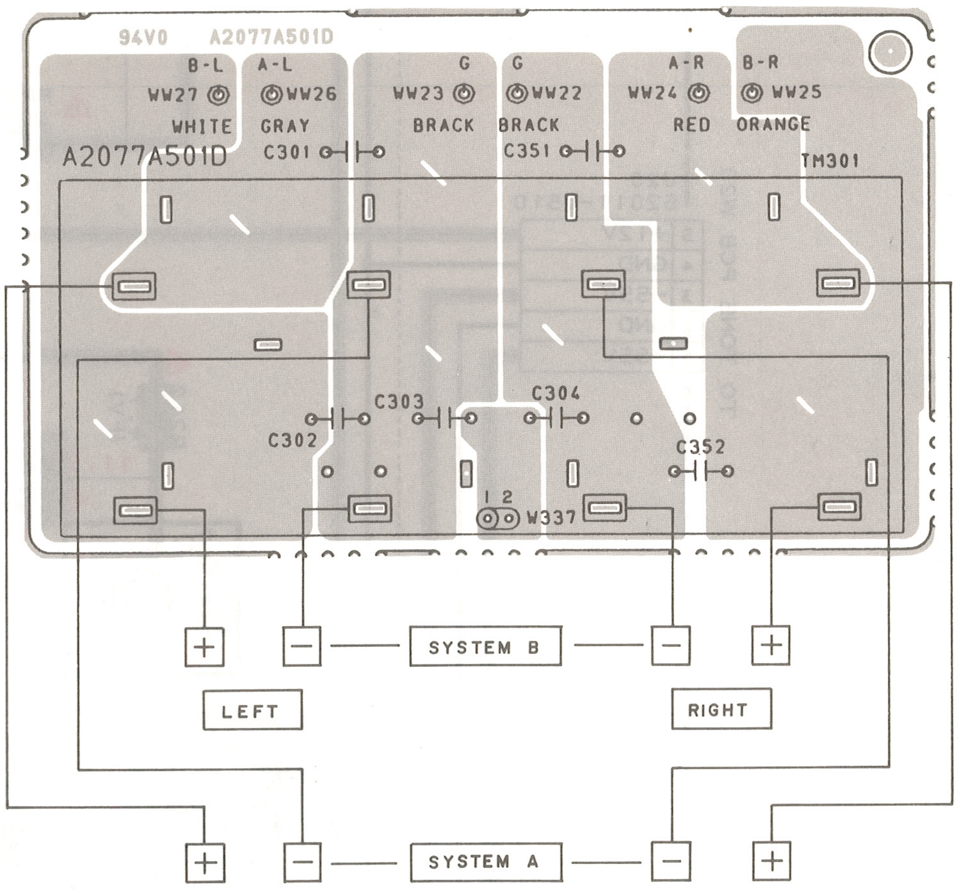
W21	A1
W28	H1

ICs

IC1	D1

TRANSISTORs

TR1	G2
TR2	F,G1
TR3	G1
TR4	F1
TR5	F1
TR6	G1
TR7	F,G1
TR8	G1
TR10	H1
TR51	B2
TR52	B1
TR53	C1
TR54	B1
TR55	B1
TR56	C1
TR57	C1
TR58	C1
TR60	C,D1


94V0 A2077A501D
B-L
A-L
G
G
A-R
B-R
WW27
WW26
WW23
WW22
WW24
WW25
WHITE
GRAY
BRACK
BRACK
RED
ORANGE
A2077A501D
C301
C351
TM301
C303
C304
C302
C352
1 2
W337
+
−
SYSTEM B
−
+
LEFT
RIGHT
+
−
SYSTEM A
−
+

SP TERMINAL PCB A2077A501D

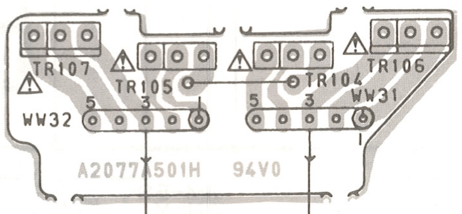
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

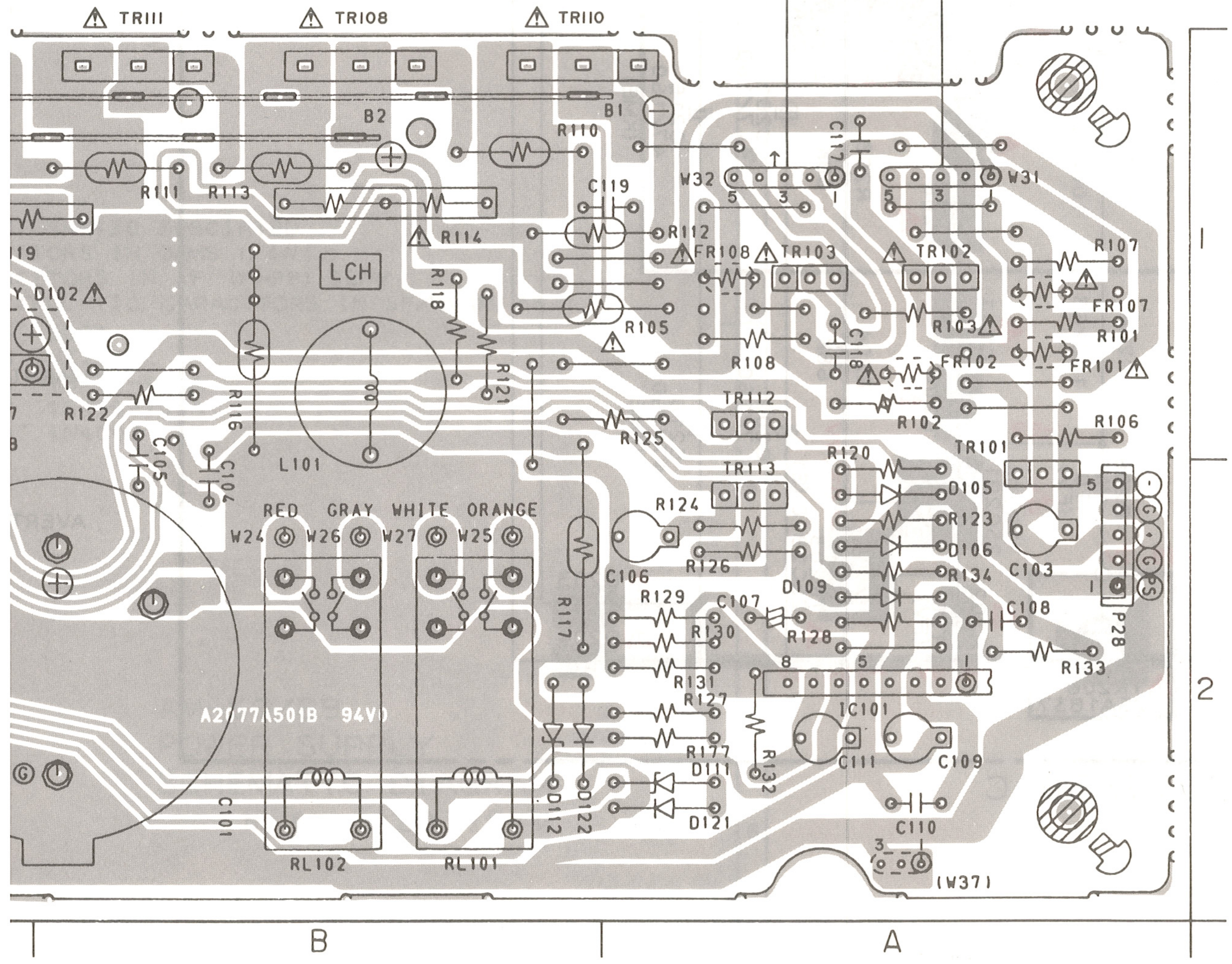
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

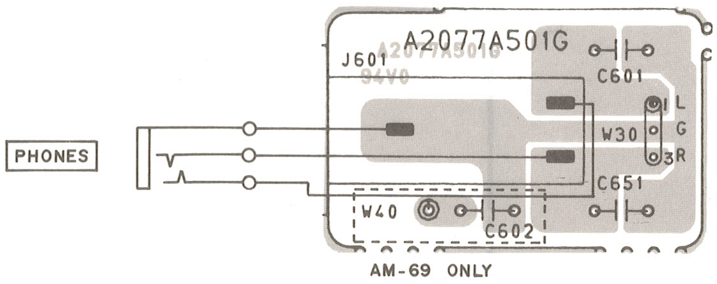
WIREs

W22	C2
W23	C2
W24	B2
W25	B2
W26	B2
W27	B2
W29	E1
W31	A1
W32	A1
W33	E1
W34	E1
W37	A2

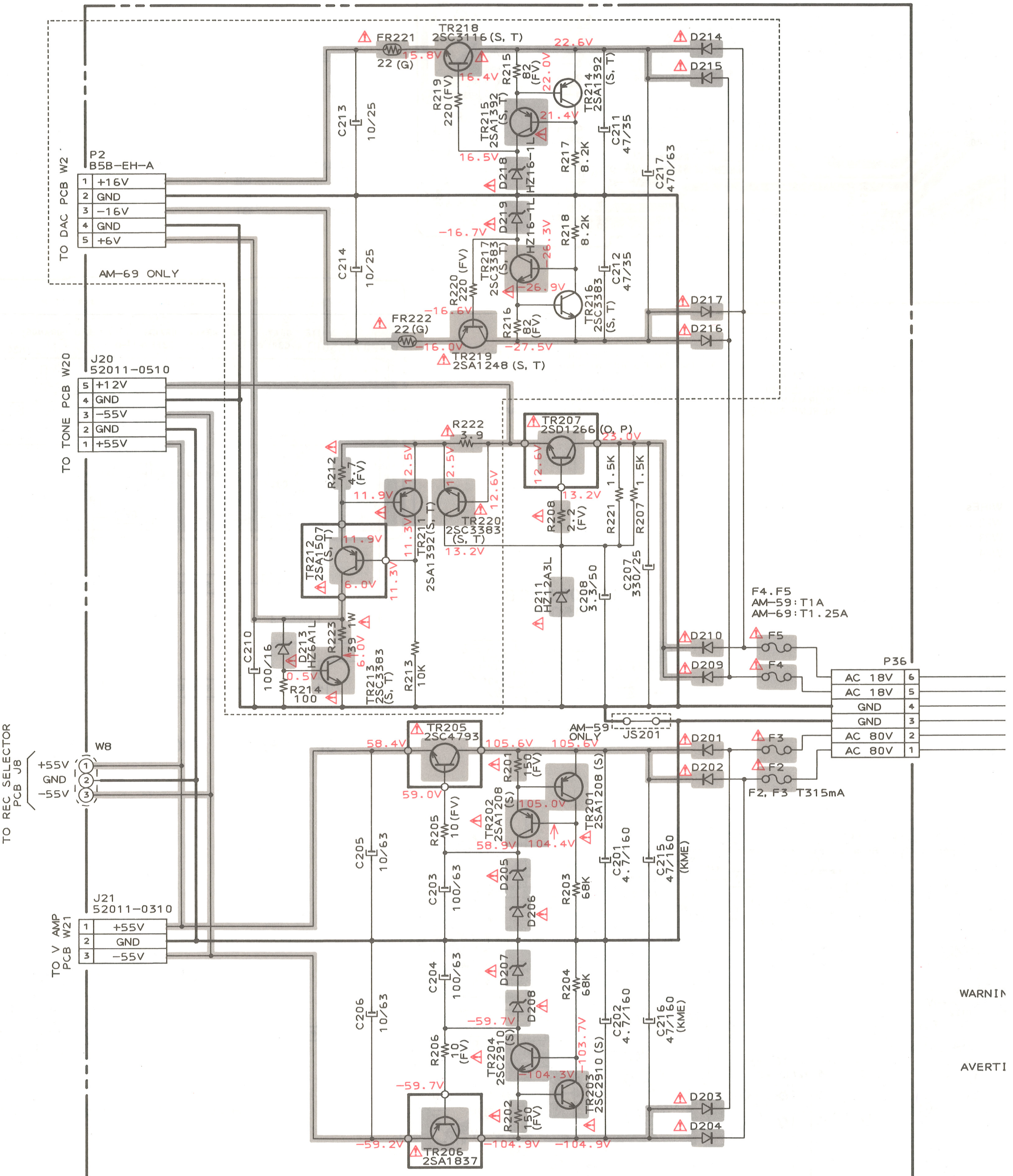
THERMO(L) P C B
A2077A501H


TR107
TR105
TR104
TR106
WW32
WW31
5 3
5 3
A2077A501H 94V0


TR111
TR108
TR110
B2
B1
R110
C117
R111
R113
C119
W32
W31
R112
R114
FR108
TR103
TR102
R107
LCH
R118
D102
FR107
R105
R101
R103
R121
R108
C118
FR102
FR101
R122
R116
R125
R102
R106
TR112
C105
C104
L101
TR101
R120
TR113
D105
RED GRAY WHITE ORANGE
W24 W26 W27 W25
R124
R123
D106
C103
C106
R126
R134
R117
R129
C107
D109
C108
R130
R128
P28
R133
R131
R127
IC101
R132
R177
C111
C109
D111
D112
D122
D121
C101
A2077A501B 94V0
C110
RL102
RL101
W37
1
2
B
A

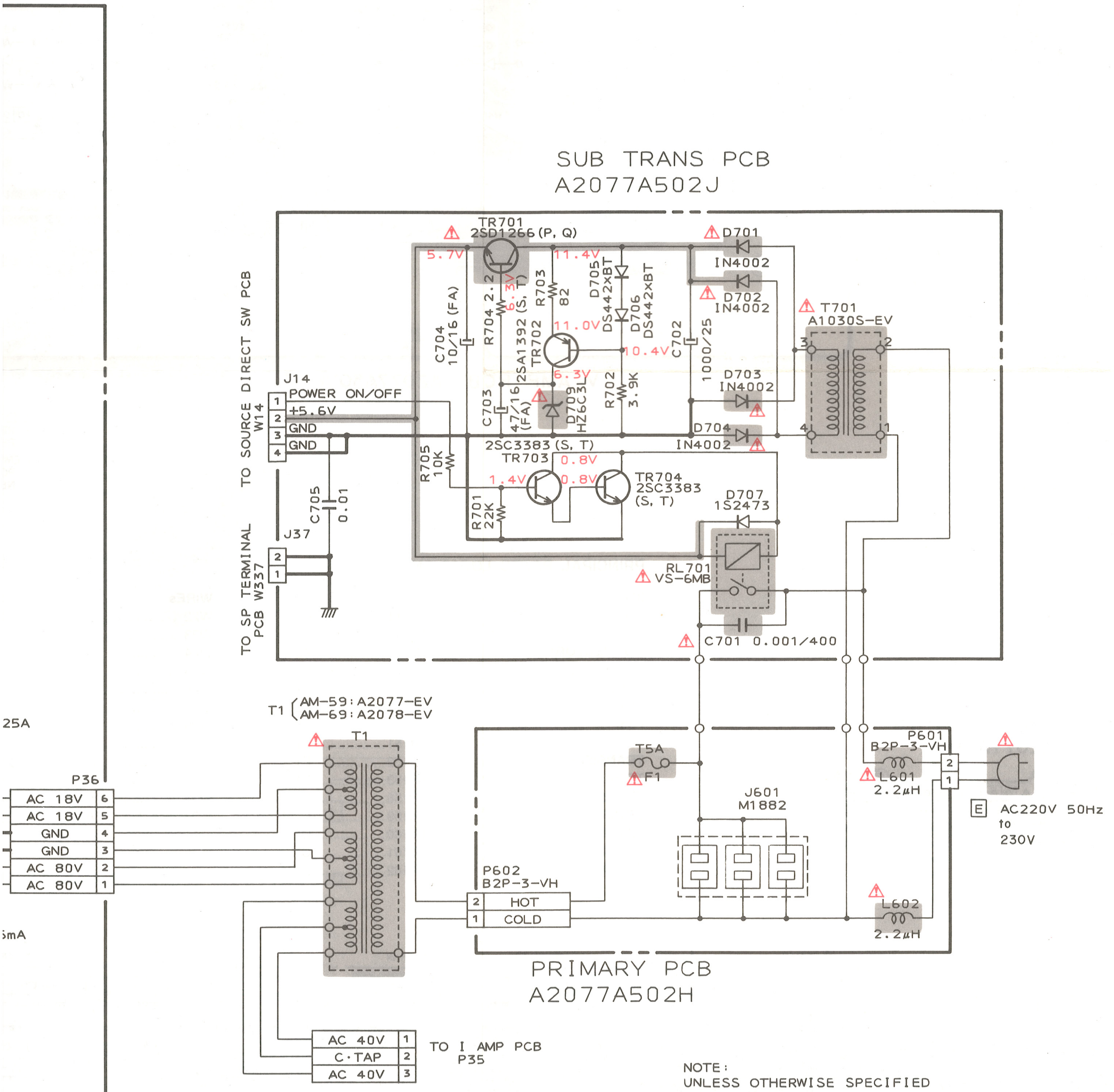

A2077A501G
J601
C601
PHONES
W30
L
G
R
C651
W40
C602
AM-69 ONLY

PHONES JACK PCB A2077A501G


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO DAC PCB W2
P2
B5B-EH-A
1 +16V
2 GND
3 -16V
4 GND
5 +6V
AM-69 ONLY
FR221
22 (G)
TR218
2SC3116 (S, T)
15.8V
16.4V
22.6V
D214
D215
R219
220 (FV)
R215
82
(FV)
22.0V
TR214
2SA1392
(S, T)
TR215
2SA1392
(S, T)
21.4V
16.5V
D218
HZ16-1L
R217
8.2K
C211
47/35
C217
470/63
C213
10/25
C214
10/25
-16.7V
D219
HZ16-1L
-26.3V
R218
8.2K
TR217
2SC3383
(S, T)
-26.9V
R220
220 (FV)
C212
47/35
TR216
2SC3383
(S, T)
D217
D216
FR222
22 (G)
-16.6V
-16.0V
TR219
2SA1248 (S, T)
R216
82
(FV)
-27.5V
TO TONE PCB W20
J20
52011-0510
5 +12V
4 GND
3 -55V
2 GND
1 +55V
R222
3.9
TR207
2SD1266 (O, P)
23.0V
12.6V
13.2V
R212
4.7
(FV)
12.5V
12.5V
12.6V
11.9V
TR211
2SA1392 (S, T)
TR220
2SC3383
(S, T)
13.2V
R208
2.2
(FV)
R221
1.5K
R207
1.5K
TR212
2SA1507
(S, T)
11.9V
11.3V
11.3V
6.0V
D211
HZ12A3L
C208
3.3/50
C207
330/25
F4, F5
AM-59 : T1A
AM-69 : T1.25A
C210
100/16
D213
HZ6A1L
R223
39
1W
6.0V
0.5V
R214
100
TR213
2SC3383
(S, T)
R213
10K
D210
F5
D209
F4
P36
AC 18V 6
AC 18V 5
GND 4
GND 3
AC 80V 2
AC 80V 1
AM-59
ONLY
JS201
D201
F3
D202
F2
F2, F3 T315mA
TO REC SELECTOR PCB J8
W8
+55V ①
GND ②
-55V ③
TR205
2SC4793
58.4V
105.6V
105.6V
59.0V
R201
150
(FV)
TR201
2SA1208 (S)
105.0V
R205
10 (FV)
TR202
2SA1208
(S)
58.9V
104.4V
C205
10/63
C203
100/63
D205
D206
R203
68K
C201
4.7/160
C215
47/160
(KME)
TO V AMP PCB W21
J21
52011-0310
1 +55V
2 GND
3 -55V
C206
10/63
C204
100/63
D207
D208
R204
68K
C202
4.7/160
C216
47/160
(KME)
-59.7V
-103.7V
R206
10
(FV)
TR204
2SC2910
(S)
-104.3V
TR203
2SC2910 (S)
-59.7V
R202
150
(FV)
D203
D204
-59.2V
-104.9V
-104.9V
TR206
2SA1837
WARNIN
AVERTI

POWER SUPPLY PCB A2077A501C

A
B
C
D
E
F


SUB TRANS PCB
A2077A502J
TR701
2SD1266 (P, Q)
5.7V
11.4V
R704 2.2
6.3V
R703 82
2SA1392 (S, T)
TR702
11.0V
D705 DS442xBT
D706 DS442xBT
10.4V
C704 10/16 (FA)
C702 1000/25
6.3V
C703 47/16 (FA)
D709 HZ6C3L
R702 3.9K
D701
IN4002
D702
IN4002
D703
IN4002
D704
IN4002
T701
A1030S-EV
TO SOURCE DIRECT SW PCB W14
J14
POWER ON/OFF
+5.6V
GND
GND
2SC3383 (S, T)
TR703
R705 10K
1.4V
0.8V
0.8V
TR704
2SC3383 (S, T)
D707
1S2473
R701 22K
C705 0.01
TO SP TERMINAL PCB W337
J37
RL701
VS-6MB
C701 0.001/400
T1 (AM-59: A2077-EV
AM-69: A2078-EV
T1
P36
AC 18V 6
AC 18V 5
GND 4
GND 3
AC 80V 2
AC 80V 1
25A
mA
T5A
F1
J601
M1882
P601
B2P-3-VH
L601
2.2μH
AC220V 50Hz to 230V
E
P602
B2P-3-VH
2 HOT
1 COLD
L602
2.2μH
PRIMARY PCB
A2077A502H
AC 40V 1
C·TAP 2
AC 40V 3
TO I AMP PCB P35

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF (P=PF) 50WV
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M) AS-1

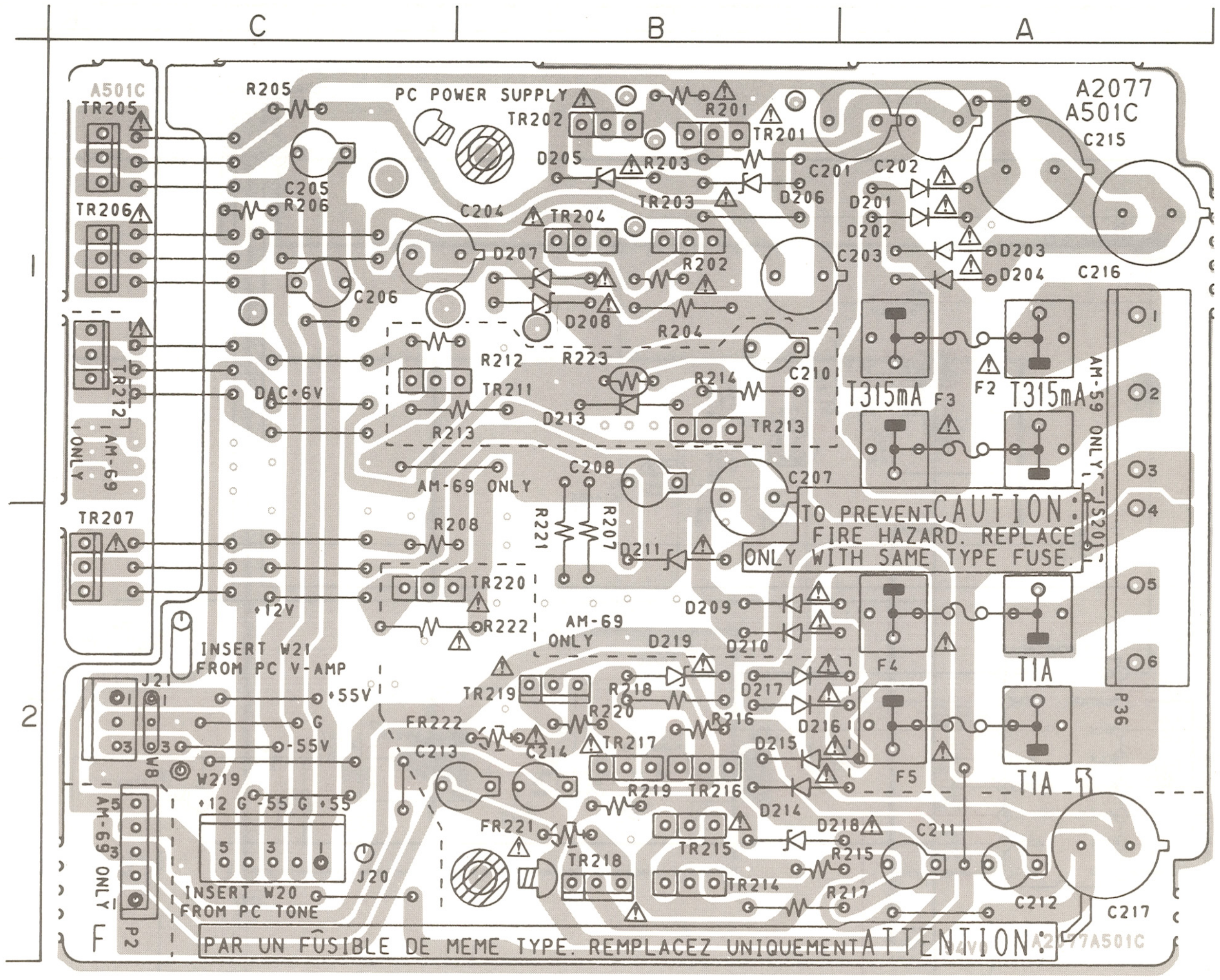
D201~204	EG01
D205~208	HZ27-3L
D209, 210	1SR35-100A
D214~217	1SR35-100A
D701~704	IN4002

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

▨ B (POWER SUPPLY) LINE

AM-59/69
POWER SUPPLY
SCHEMATIC DIAGRAM
No.5-4 A207704M
A2



C
B
A
1
2
A501C
A2077
A501C
PC POWER SUPPLY
R205
TR205
TR206
TR202
R201
TR201
D205
R203
C201
C202
C215
C205
R206
TR203
D206
D201
C204
TR204
D202
D207
C203
D203
D204
C216
R202
C206
D208
R204
TR212
AM-69 ONLY
R212
R223
R214
C210
DAC+6V
TR211
F2
T315mA
F3
T315mA
D213
TR213
R213
AM-69 ONLY
C208
C207
AM-59 ONLY
TR207
R208
R221
R207
TO PREVENT CAUTION: FIRE HAZARD. REPLACE ONLY WITH SAME TYPE FUSE.
D211
TR220
+12V
R222
AM-69 ONLY
D209
D210
F4
T1A
INSERT W21 FROM PC V-AMP
J21
D219
R218
D217
+55V
TR219
R220
G
FR222
R216
D216
-55V
W8
C213
C214
TR217
D215
F5
T1A
W219
R219
TR216
+12 G -55 G +55
D214
FR221
D218
C211
TR215
R215
J20
TR218
TR214
R217
C212
C217
INSERT W20 FROM PC TONE
P2
P36
PAR UN FUSIBLE DE MEME TYPE. REMPLACEZ UNIQUEMENT ATTENTION:
A2077A501C

POWER SUPPLY PCB A2077A501C

PRINCIPAL PARTS LOCATION

TRANSISTORs

TR201	B1
TR202	B1
TR203	B1
TR204	B1
TR205	C1
TR206	C1
TR207	C2
TR211	C1
TR212	C1
TR213	B1
TR214	B2
TR215	B2
TR216	B2
TR217	B2
TR218	B2
TR219	B2
TR220	C2

FUSE RESISTORs

FR221	B2
FR222	B2

CONNECTORs

J20	C2
J21	C2
P2	C2
P36	A1,2

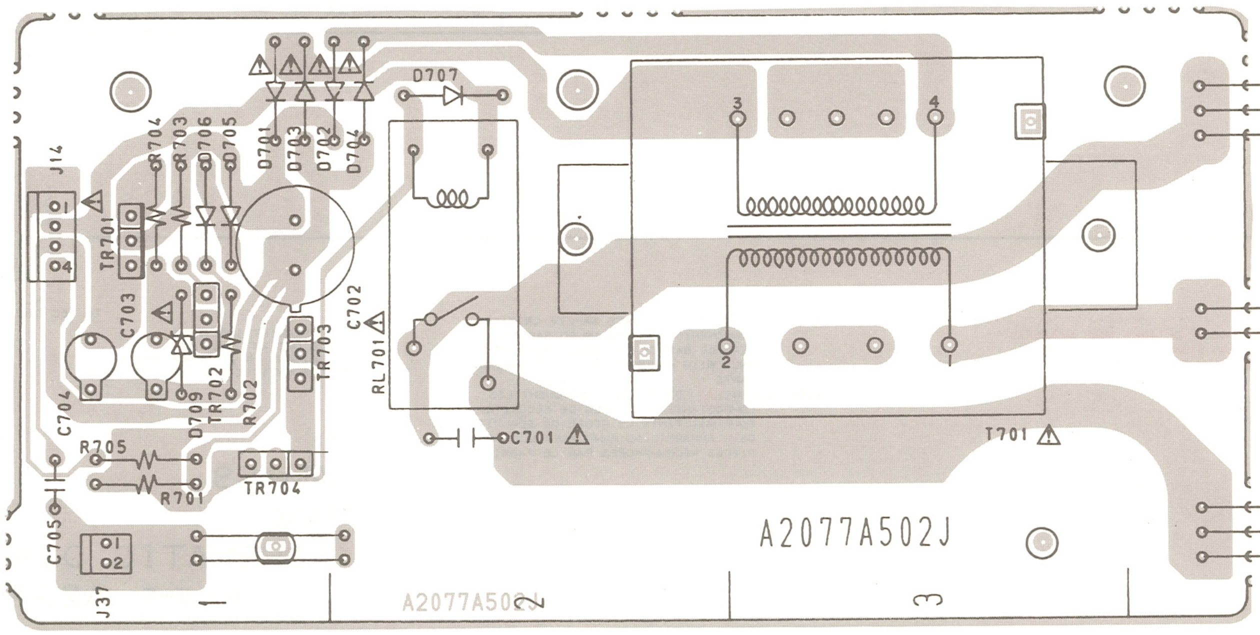
WIRE

W8	C2

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

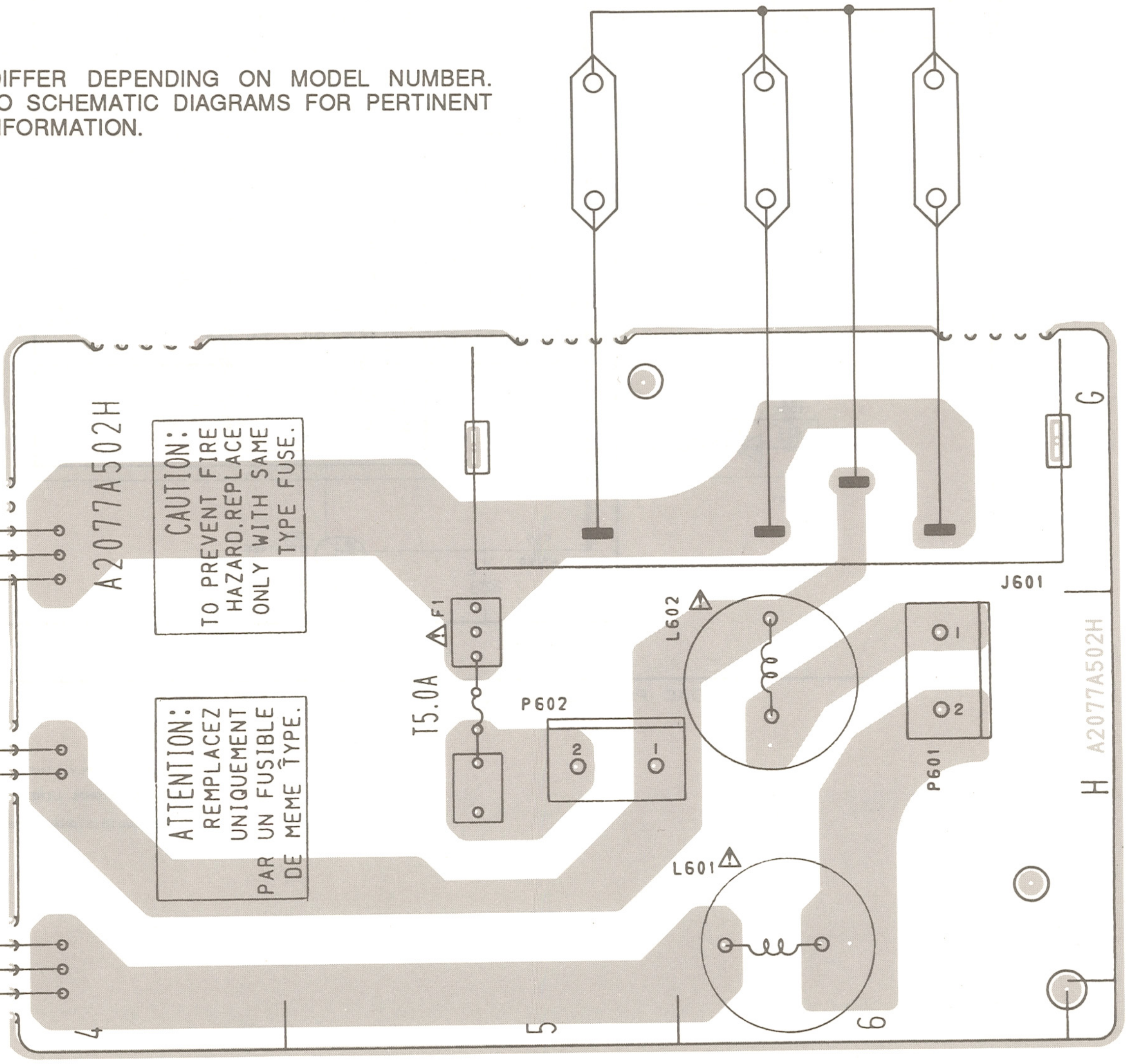
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.



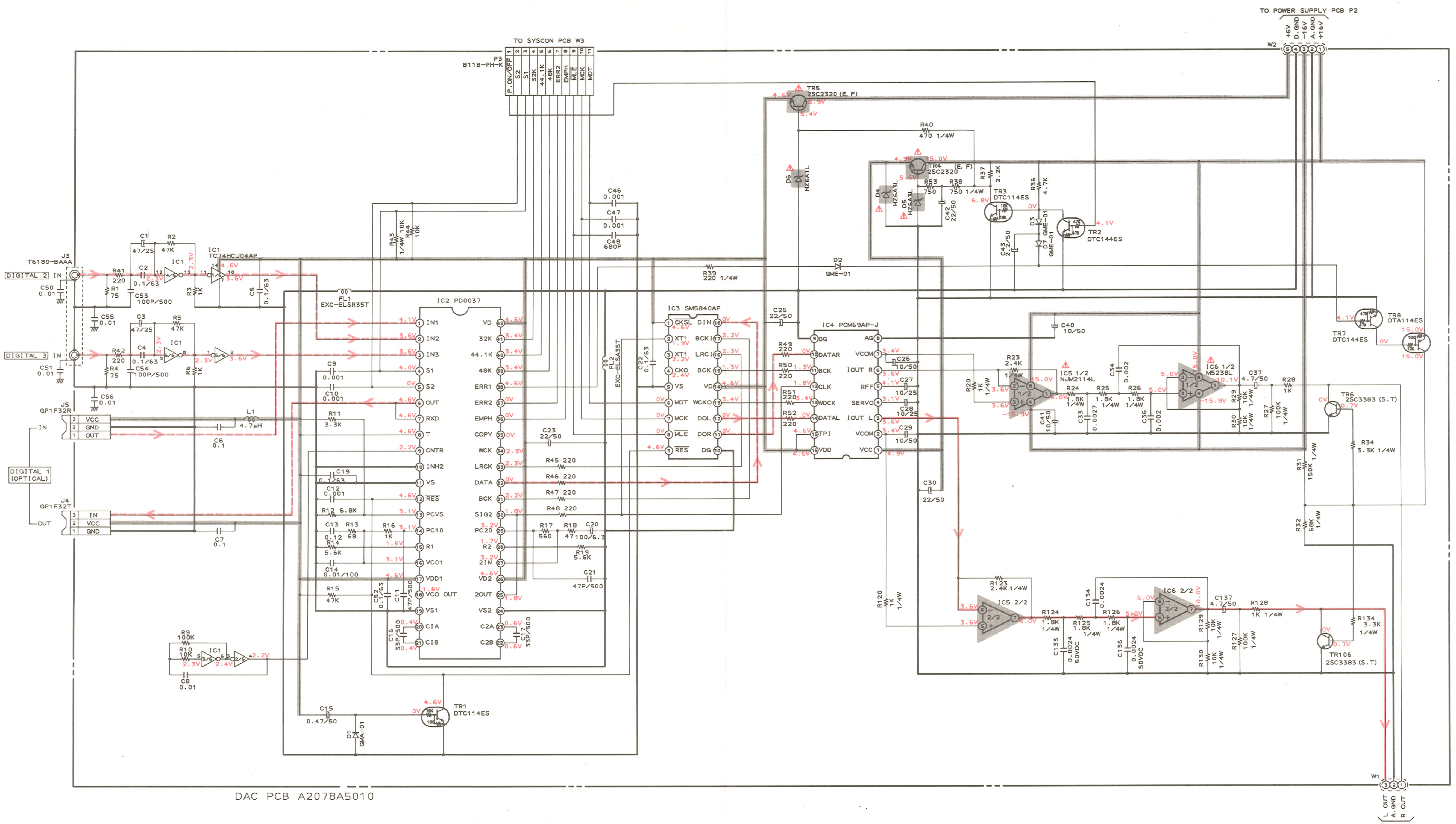
D707
J14
R704
R703
D706
D705
D701
D703
D702
D704
TR701
C703
C702
TR702
R702
TR703
RL701
D709
C704
R705
R701
TR704
C701
T701
C705
J37
A2077A502J
1
2
3

SUB TRANS PCB A2077A502J



A2077A502H
CAUTION: TO PREVENT FIRE HAZARD.REPLACE ONLY WITH SAME TYPE FUSE.
ATTENTION: REMPLACEZ UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE.
F1
T5.0A
P602
L602
J601
P601
L601
G
H
4
5
6

PRIMARY PCB A2077A502H


TO SYSCON PCB W3
P3 B11B-PH-K
P.ON/OFF
S2
S1
32K
44.1K
48K
ERR2
EMPH
MLE
MCK
MDT
TO POWER SUPPLY PCB P2
W2
+6V
D.GND
-16V
A.GND
+16V
J3 T6180-8AAA
DIGITAL 2 IN
DIGITAL 3 IN
J5 GP1F32R
VCC
GND
OUT
IN
DIGITAL 1 (OPTICAL)
J4 GP1F32T
OUT
IC1 TC74HCU04AP
FL1 EXC-ELSR35T
FL2 EXC-ELSA35T
L1 4.7µH
IC2 PD0037
IC3 SM5840AP
IC4 PCM69AP-J
IC5 1/2 NJM2114L
IC5 2/2
IC6 1/2 M5238L
IC6 2/2
TR1 DTC114ES
TR2 DTC144ES
TR3 DTC114ES
TR4 2SC2320 (E, F)
TR5 2SC2320 (E, F)
TR6 2SC3383 (S.T)
TR7 DTC144ES
TR8 DTA114ES
TR106 2SC3383 (S.T)
D1 GMA-01
D2 GME-01
D3 GME-01
D4 HZ6A3L
D5 HZ6A3L
D6 HZ6A1L
D7 GME-01
R40 470 1/4W
R39 220 1/4W
R34 3.3K 1/4W
R134 3.3K 1/4W
R31 150K 1/4W
R32 68K 1/4W
W1
L OUT
A.GND
R OUT
TO REC SELECTOR PCB P1
DAC PCB A2078A5010

▬ B (POWER SUPPLY) LINE

╍ DIGITAL SIGNAL LINE

▬ L-CH AUDIO SIGNAL LINE

INDICATED VOLTAGES WERE MEASURED
WHEN NO SIGNAL WAS BEING INPUT.
(FUNCTION: DIGITAL 1 MODE)

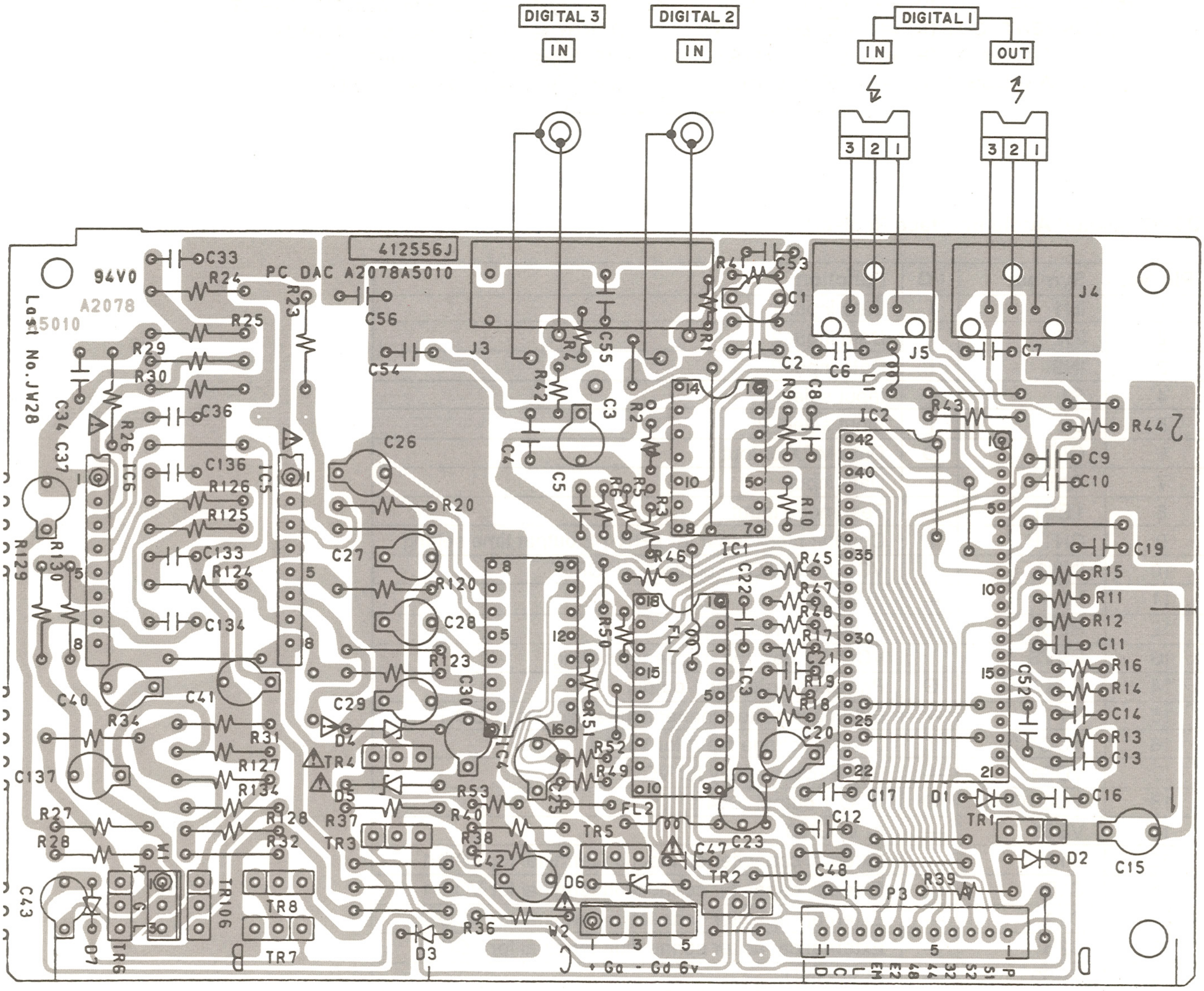
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W
ALL CAPACITORS IN µF (P=PF) 50VDC
ALL ELECTROLYTIC CAPACITORS IN µF/WV

AM-69
DAC
SCHEMATIC DIAGRAM

No.5-5 A207705M
A1

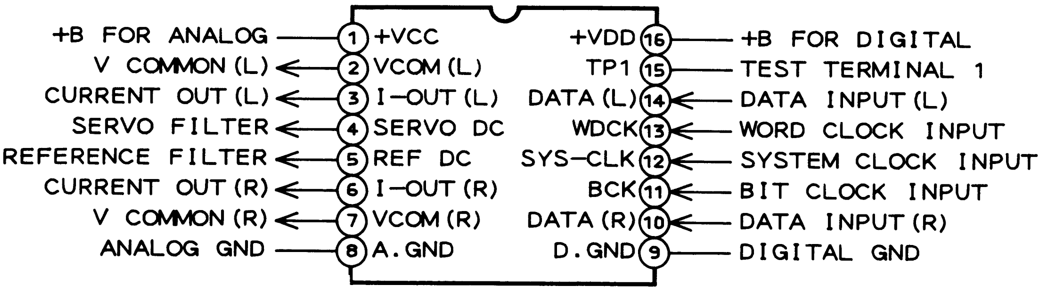

DIGITAL 3
IN
DIGITAL 2
IN
DIGITAL 1
IN
OUT
412556J
PC DAC A2078A5010
94V0
A2078
5010
Last No. JW28
J3
J4
J5
IC1
IC2
IC3
IC4
IC5
IC6
L1
FL1
FL2
TR1
TR2
TR3
TR4
TR5
TR6
TR7
TR8
TR106
D1
D2
D3
D4
D5
D6
D7
W1
W2
P3
+ Ga - Gd 6v
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C19
C20
C21
C22
C23
C25
C26
C27
C28
C29
C30
C33
C34
C36
C37
C40
C41
C42
C43
C47
C48
C52
C53
C54
C55
C56
C133
C134
C136
C137
R1
R2
R3
R4
R5
R6
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R34
R36
R37
R38
R39
R40
R41
R42
R43
R44
R45
R46
R47
R48
R49
R50
R51
R52
R53
R120
R123
R124
R125
R126
R127
R128
R129
R130
R134
D C L EM E2 48 44 32 S2 S1 P

DAC PCB A2078A5010

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

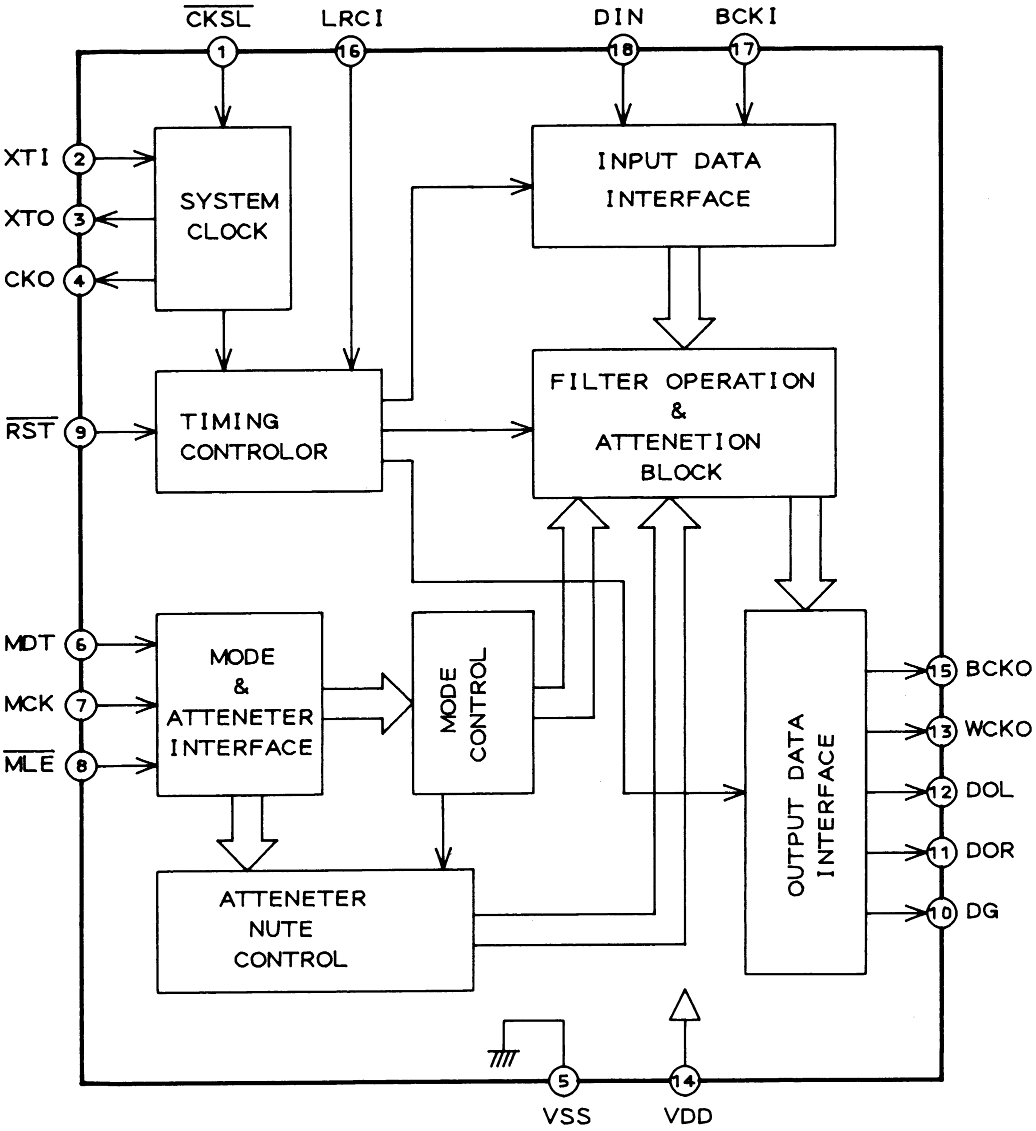
PCM67AP-J (D/A CONVERTOR)


+B FOR ANALOG
V COMMON (L)
CURRENT OUT (L)
SERVO FILTER
REFERENCE FILTER
CURRENT OUT (R)
V COMMON (R)
ANALOG GND
1 +VCC
2 VCOM (L)
3 I-OUT (L)
4 SERVO DC
5 REF DC
6 I-OUT (R)
7 VCOM (R)
8 A.GND
+VDD 16
TP1 15
DATA (L) 14
WDCK 13
SYS-CLK 12
BCK 11
DATA (R) 10
D.GND 9
+B FOR DIGITAL
TEST TERMINAL 1
DATA INPUT (L)
WORD CLOCK INPUT
SYSTEM CLOCK INPUT
BIT CLOCK INPUT
DATA INPUT (R)
DIGITAL GND

PD0037 (Digital Audio Interface Reciver)

Pin No.	Symbol	I/O	Function
1	IN1	I	Data input 1
2	IN2	I	Data input 2
3	IN3	I	Data input 3
4	S1	I	Input select 1
5	S2	I	Input select 2
6	OUT	O	Data MPX output
7	RXD	I	Data input
8	TEST	I	Test mode input
9	CNTR	I	Counter clock input for ERR 1,2 output time setting
10	INH2	I	VCO 2 ON / OFF control H: OFF
11	VSS	—	(0 V) GND
12	$\overline{\text{RESET}}$	I	Power ON reset input
13	PSVS	I	VCO 1,2 free-run frequency setting
14	PC1OUT	O	Phase comparator 1 output
15	R1	—	External resister connection terminal for VCO 1
16	VCO1 IN	I	Control voltage input for VCO 1
17	VDD1	—	(+B) Power supply for VCO 1
18	VCO1OUT	O	VCO 1 output (384fs)
19	VSS1	—	(0 V) GND
20	C1A	—	External capaciter connection terminal for VCO 1
21	C1B	—	External capaciter connection terminal for VCO 1
22	C2A	—	External capaciter connection terminal for VCO 2
23	C2B	—	External capaciter connection terminal for VCO 2
24	VSS2	—	(0 V) GND
25	VCO2OUT	O	VCO 2 output (384 fs)
26	VDD2	—	(+ B) Power supply for VCO 2
27	VCO2IN	I	Control voltage input for VCO 2
28	R2	—	External resister connection terminal for VCO 2
29	PC2OUT	O	Phase comparator 2 output
30	SIG2	I	Phase comparator 2 input
31	BCK	O	Bit clock output
32	DATA	O	Audio data output
33	LRCK	O	L ch / R ch select pulse out (H: L ch, L: R ch)
34	WCK	O	Word clock output
35	COPY	O	Copy data output (H: copy enable)
36	EMPH	O	H: Emphasis-ON
37	ERR2	O	2nd PLL loop unlock output (H: unlock)
38	ERR1	O	1st PLL loop data read out error output (H: error)
39	48K	O	Sampling frequency data output L: active
40	44.1K	O	
41	32K	O	
42	VDD	—	(+ B) Power supply for logic

SM5840AP (DIGITAL FILTER)


CKSL
LRCI
DIN
BCKI
1
16
18
17
XTI
2
XTO
3
CKO
4
SYSTEM CLOCK
INPUT DATA INTERFACE
RST
9
TIMING CONTROLOR
FILTER OPERATION & ATTENETION BLOCK
MDT
6
MCK
7
MLE
8
MODE & ATTENETER INTERFACE
MODE CONTROL
OUTPUT DATA INTERFACE
15
BCKO
13
WCKO
12
DOL
11
DOR
10
DG
ATTENETER NUTE CONTROL
5
VSS
14
VDD